

(Nos. 284-387)

1923—No. 3

MARCH 31ST, 1923

American Society of Civil Engineers,

33 WEST THIRTY-NINTH STREET

NEW YORK CITY

PRELIMINARY NOTICE

OF

APPLICATIONS

FOR

ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for **ADMISSION** or for **TRANSFER**, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility.

It is the **DUTY** of all **MEMBERS** to the **PROFESSION** to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a **DEFINITE RECOMMENDATION AS TO THE PROPER GRADING IN EACH CASE** be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience.

If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board.

COMMUNICATIONS RELATING TO APPLICANTS ARE CONSIDERED BY THE BOARD AS STRICTLY CONFIDENTIAL.

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from Non-Residents of North America until the expiration of ninety (90) days from the date of this list.

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List, Arranged Alphabetically.

Name.	Address.	Page.	Name.	Address.	Page.
ALLING, ARTHUR R.....	Little Rock, Ark.....	119	KINGSCOTT, LOUIS C.....	Lansing, Mich.....	104
ANDERSON, EDWARD E.....	Romney, W. Va.....	95	LAYNE, LOYD F.....	Memphis, Tenn.....	104
ASHWORTH, RAYMOND C.....	Berkeley, Cal.....	95	LIMA, GUSTAVO.....	Ithaca, N. Y.....	104
AYRES, QUINCY C.....	Ames, Iowa.....	119	MCCLASKEY, GEORGE G.....	Canton, Ohio.....	107
BABCOCK, HENRY G.....	W. New Brighton, N. Y.....	96	MCCLEAN, ROBERT.....	Bloomfield, N. J.....	107
BADGLEY, BEN. O.....	Los Angeles, Cal.....	96	MCCLURE, JOHN T.....	Frankfort, Ky.....	107
BARDEN, WILLIAM J.....	Florence, Ala.....	96	MAGNUSSON, CARL E.....	Seattle, Wash.....	108
BEARFALD, MICHAEL.....	Kingston, N. Y.....	97	MARSH, CLAUDE P.....	Cleveland, Ohio.....	108
BONE, LEWIS B.....	Dallas, Tex.....	97	MOORE, GEORGE R.....	Manasquan, N. J.....	108
BRIGHAM, JOHN C.....	Summit, N. J.....	98	MORRISON, CHARLES W.....	Brooklyn, N. Y.....	109
BUCHECKER, ALBERT I.....	Spokane, Wash.....	119	MYERS, CLYDE.....	Spokane, Wash.....	121
CADY, RALPH H.....	Havana, Cuba.....	98	NEWTON, FREDERICK W.....	New York City.....	109
CARSWELL, CHARLES.....	Philadelphia, Pa.....	98	NICHOLSON, ROBERT H.....	San Francisco, Cal.....	109
CLARK, CHARLES S.....	Binghamton, N. Y.....	98	OLSON, WILLIAM C.....	Kinston, N. C.....	110
CLAYBOURN, JOHN G.....	Pedro Miguel, Panama.....	98	PARKER, EARLE D.....	Binghamton, N. Y.....	110
CLEVER, WILLIAM.....	Brooklyn, N. Y.....	99	PARROTT, JOHN C.....	Roanoke, Va.....	111
CRUSE, WILLIAM R.....	Jackson, Mich.....	99	PEYTON, WYTHE M.....	Asheville, N. C.....	111
DANIELS, ARTHUR.....	Minneapolis, Minn.....	120	PHILLIPS, VANN R.....	Detroit, Mich.....	111
DAUCHY, FREDERICK B.....	Riverside, Cal.....	99	PINCKNEY, CLIFFORD M.....	New York City.....	112
DAVIDSON, NORMAN H.....	Rochester, N. Y.....	100	PRAGNELL, WILLIAM W.....	Grantwood, N. J.....	112
DE LA GUARDIA, MARIO.....	New York City.....	100	RAY, JAMES P.....	Lawrenceburg, Ind.....	113
DISKEN, JAMES F.....	Brooklyn, N. Y.....	100	REID, JOHN W.....	West Detroit, Mich.....	113
DRESSLER, ROLDON F.....	Chicago, Ill.....	100	SAMS, HAL J.....	Berkeley, Cal.....	113
ECKLES, ROBERT A.....	New Castle, Pa.....	100	SCHNABEL, WILLIAM C.....	Baltimore, Md.....	121
EDLUND, LAWRENCE L.....	Chicago, Ill.....	100	SCHNEIDER, EMIL H.....	Brooklyn, N. Y.....	113
EMANS, KARL.....	Geneseo, N. Y.....	101	SEAMAN, VAN B.....	Brooklyn, N. Y.....	113
ESPY, THOMAS W.....	San Francisco, Cal.....	120	SELLNOW, FRANK C.....	Haskell, N. J.....	113
FOLEY, ALBERT E.....	Charlerol, Pa.....	101	SHERMAN, ARTHUR L.....	Newark, N. J.....	122
GENNET, CHARLES W., Jr.....	Chicago, Ill.....	101	SMART, CLINTON H.....	Troy, N. Y.....	114
GILLIES, JAMES I.....	Amityville, N. Y.....	101	SMITH, EDWARD K.....	Beloit, Wis.....	124
GIVEN, JAY A.....	Dunsmuir, Cal.....	102	SMITH, JOHN T.....	Montevideo, Uruguay.....	114
GOINES, LAURENCE A.....	Yemassee, S. C.....	102	SMITH, LESTER C.....	New Orleans, La.....	114
GOWEN, JOHN F.....	Dobbs Ferry, N. Y.....	102	SOUTHERINGTON, E. J.....	Cincinnati, Ohio.....	115
HAERTLEIN, ALBERT.....	Cambridge, Mass.....	124	STANLEY, WILLIAM E.....	Chicago, Ill.....	124
HALEY, FREDERIC W.....	Dorchester, Mass.....	103	SWITZER, HERMAN J.....	Brooklyn, N. Y.....	115
HARN, JOHN E.....	Baltimore, Md.....	124	TAGGART, WILLIAM M.....	Los Angeles, Cal.....	115
HAVELIN, JULIUS E.....	Brooklyn, N. Y.....	103	TALLMAN, PAUL B.....	Rockville Center, N. Y.....	122
HENDRICKSON, B. H.....	Brownsville, Tex.....	103	TAYLOR, WALTER H.....	Norfolk, Va.....	116
HITCHCOCK, CHARLES H.....	Mt. Airy, Pa.....	103	TRAMS, THEODORE H.....	Milwaukee, Wis.....	116
HOLLEY, HAROLD F.....	Carson City, Nev.....	120	VAN WAGNER, WALTER M.....	Roselle, N. J.....	116
HORTON, GEORGE L.....	Dallas, Tex.....	104	VAUGHN, FRANK K.....	Hamilton, Ohio.....	117
HOTT, SABERT A.....	Medford, Okla.....	104	WARD, JOSEPH E.....	Wichita Falls, Tex.....	117
IRONS, JAMES P.....	Garnett, Kans.....	104	WARDWELL, THEODORE M.....	Sheridan, Wyo.....	117
JACOBI, ALFRED F.....	New Orleans, La.....	104	WENTWORTH, JOHN L.....	Norfolk, Va.....	117
JACOBSON, HERMAN H.....	Brooklyn, N. Y.....	105	WEST, LESTER W.....	Worcester, Mass.....	117
JOHNSON, BENJAMIN O.....	Livingston, Mont.....	105	WHEELER, JERROLD E.....	Pittsburgh, Pa.....	118
JONES, JOHN E.....	Columbia, N. J.....	105	WHITBECK, LEO F.....	Santa Ana, Salvador.....	122
JORDAN, SAMUEL A.....	Cincinnati, Ohio.....	105	WILLIS, WILLIAM P.....	Charleston, S. C.....	118
KANG, SHIH-CHENG.....	New York City.....	106	WOLTMANN, JESSE J.....	Bloomington, Ill.....	123
KESTLY, JOHN J.....	Nenana, Alaska.....	106	WYLY, LAWRENCE T.....	Minneapolis, Minn.....	118
KERNAN, JOSEPH T.....	Andover, Va.....	121	YOUNGS, WALTER C.....	Dayton, Tex.....	123
KING, WARREN R.....	Chattanooga, Tenn.....	106	ZIGENBEIN, CLARENCE E.....	Dallas, Tex.....	118

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The numbers to the left of each record indicate the serial number of the applicant for the current year, and the district in which he resides.

The note in heavy type represents, in each case, the estimate of the Applicant of the time he has spent in Active Practice, Responsible Charge, and in Designing. These figures do not include the allowance of two years for graduation.

FOR ADMISSION

ANDERSON, EDWARD EMIL—Romney, W. Va.—(Age 39. Born Lincoln, Nebr.) (B. Sc. in C. E., Univ. of Nebr., 1905.)—June 1905 to April 1917 Asst. Supt. of Constr., Univ. of Nebraska, in charge of new buildings, including supervision of fire-proof schools, with heating, plumbing, wiring and furniture equipment (cost up to \$250 000 each), (6) and designs of buildings with equipment (cost up to \$100 000), also power-plant work and miscellaneous engineering: April 1917 to May 1918 Dept. Mgr., Nebraska Material Co., supervising installation of marble and tile work, also engineering work: May 1918 to Jan. 1919 Draftsman, Truscon Steel Co., in Indianapolis and Philadelphia offices, on reinforced concrete building construction, also on reinforced concrete ships and steel sash layouts: Sept. 1919 to July 1922 Inspector of Constr., U. S. Govt., at Naval Ordnance Plant, South Charleston, W. Va., as Inspector and Supervisor on plain and reinforced concrete work, consisting of very heavy building foundations, for 14 000-ton forging press with auxiliaries, for 7 500-ton forging press, retaining walls for large gun heat-treatment pit, and numerous complicated foundations for heat-treatment, gas open hearth and electric steel melting furnaces; also for heavy gun and armor plate machinery, and reinforced concrete building construction of various types; supervised fabrication and placing of reinforcing steel in these structures and erection of heavy structural steel and miscellaneous heavy building construction: July 1922 to date Asst. Engr., State Road Comm. of West Virginia, supervising construction of State roads also reinforced concrete and steel highway bridges. (Active practice 16.9 years: Res. Ch. 9.5: Design 3.5). Refers to G. W. Bates, M. Bloch, B. E. Gray, C. K. Harvey, R. Whitman.

ASHWORTH, RAYMOND CHAPMAN—2735 Ellsworth St., Berkeley, Cal.—(Age 39. Born Chillicothe, Ohio.)—March to Sept. 1903 Rodman, Chicago, Rock Island & Pacific Ry.: 285 Oct. 1903 to Feb. 1905 Rodman, Draftsman and Instrumentman, City Engr.'s office, Colorado Springs, Colo.: March to Aug. 1905 in charge of field party for R. M. Cannon, (13) Min. Engr., Rhyolite, Nev., mine surveys, water development: Sept. to Dec. 1905 Rodman, San Pedro, Los Angeles & Salt Lake Ry. in Nevada: Jan. to Aug. 1906 Instrumentman, Union Pacific Ry.: Sept. 1906 to April 1907 student, Valparaiso (Ind.) Univ.: May 1907 to March 1908 Instrumentman (6 months) and Res. Engr. (5 months), Chicago, Milwaukee & St. Paul Ry., heavy rock and tunnel construction in 16-mile cañon, in charge riprap quarry and canal construction at Musselshell, Mont.: May 1908 to Feb. 1909 Asst. Engr., City of Colorado Springs, in charge of surveys and estimates of North Slope Water System: March to Oct. 1909 Engr. and Supt. for D. J. Burke, Contr., in charge during construction of Gallatin Valley Elec. Ry., Bozeman, Mont.: Nov. 1909 to Jan. 1910 Detail Engr., San Luis (Colo.) Development Co., in charge of precision survey of old Colorado-New Mexico State Line between San Luis and Rio Grande River Cañon (30 miles): March 1910 to March 1912 Res. Engr. (1½ years) in charge of 48 miles of roadbed construction and Engr. (8 months) in charge of construction, tracklaying, bridging, construction of roadway buildings, train service and other construction forces, R. A. Thompson, Wichita Falls, Tex.: May 1912 to Jan. 1913 Draftsman and Instrumentman, Chicago, Milwaukee & Puget Sound Ry.: Feb. 1913 to Oct. 1918 Asst. Engr., R. R. Comm. of California, in charge of valuation of several steam and electric railways, reports on new railway projects and abandonment of existing lines, traffic surveys, service investigations, reports on corporate history and finances, land

FOR ADMISSION

appraisal: Nov. 1918 to Oct. 1919 Asst. Engr., Atchison, Topeka & Santa Fe Ry., San Francisco, Cal., in charge of office handling adjustments in valuation of Company's Coast Lines made by Interstate Commerce Comm.: Nov. to Dec. 1919 Asst. Engr., Wichita Falls, Ranger & Ft. Worth Ry., in charge of 10 miles of railroad construction and townsite surveys: March 1920 to date Asst. Engr., R. R. Comm. of California, in charge of valuation of physical properties of Spring Valley Water Co. (San Francisco water supply), valuation of Market St. Rys. and South San Francisco Ry. & Power Co., also of street railway systems in Sacramento, Fresno, Bakersfield and Los Angeles (total value of property appraised approx. \$150 000 000). (Active practice 18.8 years: Res. Ch. 14.6: Design 1.8). Refers to N. R. Ellis, W. Hall, J. G. Hunter, C. I. Rhodes, W. Stava, R. A. Thompson.

BABCOCK, HENRY GRINNELL—261 Bement Ave., West New Brighton, N. Y.—(Age 36. Born Jersey City, N. J.) (C. E., Columbia Univ., 1908.)—Oct. 1908 to April 1909 286 Asst. in drawing, Columbia Univ., etc.: May 1909 to Dec. 1910 with Walter S. Morton, Hydr. Engr., Chicago, Ill., 1½ years as Draftsman on design and computations, hydro- (1) electric plants and 7 months Res. Engr. on construction of 3 000-h. p. hydro-electric plant at High Falls, N. Y.: May 1911 Notekeeper with Hazen & Whipple, on survey, Yonkers Water Supply: June to Aug. 1911 Computer, on earthwork, New York Central R. R.: Sept. 1911 to Jan. 1913 Draftsman, American Smelting & Refining Co., most of time acting as Outside Engr. on construction; office work included drafting, furnaces, flues, etc., and field work laying out buildings, engine foundations, tracks, pipelines, crane runways, flues, etc.; tests of flues and stacks for draft troubles: June 1913 to Sept. 1915 Jun. Engr., Asst. Engr. and Sec. Engr., Public Service Comm., New York, on subway construction, in charge of final estimate (1½ years), final estimate and line and grade party (6 months), base-line party (3 months) and Sec. 2A of Route 5 (6 months): June 1916 Draftsman with George White, Experimental Machinist, on moving picture apparatus: July to Aug. 1916 Asst. Engr., New York State Highway Comm., reviewing plans and miscellaneous work: June 1917 to April 1919 Private, Corporal and Master Engr., 11th Regt. of Engrs., U. S. Army, 2 months in charge of weir construction at Ceylon, St. Sebastien, Ambazac, and La Souterraine, 1 month on bridge stress computations, and 2 months planning and supervising bridge reinforcement, making reports on condition of bridges, Commercy-Woinville R. R.: July 1919 to date Asst. Engr., New York and New Jersey Bridge and Tunnel Comms., Hudson River Vehicular Tunnel, 8 months on studies of stresses in tunnel lining, remainder of time mostly on responsible designing and checking designs of steel and reinforced concrete structures, including sump and pump room, parts of land and river shaft caissons, subway approach, etc. (Active practice 12.2 years: Res. Ch. 2.2: Design 4.5). Refers to O. L. Brodie, W. H. Burr, B. A. Hodgdon, G. Lehlbach, A. J. Mayell, W. B. Parsons, O. Singstad.

BADGLEY, BEN OLIVER—1667 South Harvard Blvd., Los Angeles, Cal.—(Age 29. Born Colton, Cal.)—Oct. 1912 to Dec. 1913 Chainman and Transitman, and Jan. to Dec. 1914 287 Transitman, with H. S. Gierlich, Monrovia, Cal.: Jan. 1915 to Aug. 1917 Asst. City Engr., Monrovia and Arcadia, Cal., municipal engineering and construction work: Sept. (11) 1917 to Jan. 1919 Lieut. of Engrs., U. S. Reserves: March 1919 to Feb. 1920 Supt. of Constr., J. Alden Griffin Constr. Co., Los Angeles, on building construction, road building and contracting: Sept. 1921 to March 1922 Inspector of Constr., City of Los Angeles, Cal.: March 1922 to date Supt. of Eng. and Constr., J. Harvey McCarthy Co., Los Angeles, laying out subdivisions, house and building construction. (Active practice 6 years: Res. Ch. 3.8: Design 1.6). Refers to P. H. Albright, G. W. Ellis, J. A. Griffin, W. T. Knowlton, J. K. Scammell.

BARDEN, WILLIAM JONES, Col., Corps of Engrs., U. S. Army, U. S. Engr. Office, Florence, Ala.—(Age 52. Born Lakeville, Conn.) (U. S. Mil. Acad., 1894; U. S. Engr. School of 288 Application, 1897; Army War Coll., 1914.)—June 1897 to Oct. 1899 Asst. to Dist. Engr., New London, Conn., on fortification work at eastern entrance to Long Island Sound: (10) Oct. 1899 to July 1900 Engr. Officer, Dept. of Matanzas and Santa Clara, Cuba, on street and road work and water supply: July 1900 to May 1902 Chf. Engr., City of Havana, Cuba, Asst. Engr. Officer, Div. and Dept. of Cuba: Sept. to Nov. 1900 Acting Chf. Engr., Div. of Cuba: April to May 1901 Acting Chf. Engr., Dept. of Cuba: May to Aug. 1902 at Washington, D. C., on business connected with late Military Government of Cuba, preparing final report as Chf. Engr., City of Havana: Sept. 1902 to April 1903

FOR ADMISSION

commanding Co. I, 3d Battalion Engrs., Washington Barracks, D. C.: April 1903 to May 1904 in charge of Chattanooga (Tenn.) Engr. Dist.: April to July 1903 in charge of Nashville (Tenn.) Engr. Dist.: June 1904 to Nov. 1905 commanding Co. E, 2d Battalion Engrs., and Nov. 1905-Oct. 1906 Instructor of Military Eng., U. S. Engr. School, at Washington Barracks: June 1906 to Sept. 1909 Asst. to Chf. of Engrs., U. S. Army, in charge of Accounts and Contracts Sec.: Sept. 1909 to May 1910 Instructor, U. S. Engr. School: May 1910 to Aug. 1913 Commandant, U. S. Engr. School and Port at Washington Barracks: Dec. 1906 to Aug. 1913 Member, Board of Engrs. for Rivers and Harbors: May to July 1914 at War Dept. in connection with Expedition to Vera Cruz, Mexico: Aug. to Nov. 1914 Engr. Officer, Expedition to Vera Cruz: Jan. 1915 to June 1917 in charge of river and harbor works, Dallas (Tex.) Engr. Dist.: June to Aug. 1917 commanding 5th Regt. of Engrs., Corpus Christi, Tex.: Aug. 1917 to April 1918 commanding 111th Regt. of Engrs., Camp Bowie, Ft. Worth, Tex.: April to Aug. 1918 commanding 602d Regt. of Engrs., Camp Devens, Mass., and in France: Aug. 1918 to May 1919 Chf. Engr., 6th Army Corps (nearly 3 months), 3d Army (10 days) and 9th Army Corps (about 5½ months), France: July 1919 to Sept. 1920 in charge of river and harbor and fortification works, Jacksonville (Fla.) Engr. Dist.: Feb. to May 1920 Div. Engr., Southeastern Div.: Sept. 1920 to date in charge of Florence (Ala.) Engr. Dist. (Active practice 23.8 years: Res. Ch. 21.2: Design 6.4). Refers to F. V. Abbot, W. M. Black, H. F. Hodges, C. W. Kutz, W. C. Langfitt, F. L. Stuart, W. C. Weeks.

BEBARFALD, MICHAEL—276 Fair St., Kingston, N. Y.—(Age 27. Born New York City.) (B. S. in Civ. Eng., 1917, and C. E., 1918, N. Y. Univ.)—June to Sept. 1916 Instrumentman (Rodman), New York State Barge Canal: April to June 1917 Instrumentman, Thompson Starrett Co. and Bethlehem Steel Co., on town layout at Freemansburg, Pa.: (3) June to Sept. 1917 Asst. to Engr., in charge of construction of two open-hearth tilting furnaces, Saucon Plant, Bethlehem Steel Co.: Sept. 1917 to Aug. 1918 Chf. Field Engr., Merchant Shipbuilding Corporation, in charge of surveys for all plant construction, including shipways, cranes, buildings, railroad harbor, docks and part of townsite of Harriman, Pa.: Aug. 1918 to July 1919 Coxswain to Ensign, Deck Officer, U. S. S. *George Washington*, U. S. Navy: July 1919 to Dec. 1921 with Terry & Tench Co., Inc., until Aug. 1920 in office and field in charge of materials and layout for construction of Erie Canal power barges, Long Island City, then Piling Inspector and Representative of Company in charge of piling operations, inspecting buying, shipping from southern ports (Georgia) for material for Staten Island Piers; after Feb. 1921 Res. Engr. on construction of Rondout Suspension Bridge at Kingston, N. Y.: Jan. 1922 to date Vice-Pres. and Gen. Mgr., The W. E. Joyce Co., Inc., Supt. of Constr. and Chf. of Surveys, etc. (Active practice 5 years: Res. Ch. 3.1). Refers to M. Halpern, A. Haring, W. E. Joyce, F. A. Renner, H. D. Robinson, C. H. Snow.

BONE, LEWIS BERNARD—Care, Austin Bros. Bridge Co., Dallas, Tex.—(Age 27. Born in Rowen County, Ky.) (B. S., Tex. Agri. and Mech. Coll., 1918.)—March 1913 to 290 Sept. 1914 Rodman and Instrumentman, June to Sept. 1915 Instrumentman and Estimator, and June to Sept. 1916 Instrumentman, Missouri, Kansas & Texas Ry.: June to (15) Sept. 1917 with Texas Agricultural and Mechanical Coll., on street surveying, grading and surfacing, steam line survey and construction, sewer line surveys and looking after frame building construction: Jan. 1919 to June 1920 Res. Engr. in charge of Scurry County road work, had entire responsibility of locating and working up plans, to approval of State Highway Engr. of Texas and Federal Dist. Engr., for two highways (one 22 miles and one 20½ miles long); had entire charge of construction on the 22-mile highway: June to Sept. 1920 Transitman, M. K. & T. Ry., on building of yard at Osage, Okla., part of time in charge of work: Sept. 1920 to June 1921 Instructor, Texas Agricultural and Mechanical Coll., in descriptive geometry and mechanical drawing and some highway engineering: July 1921 to date Asst. Engr., Austin Bros. Bridge Co., Dallas, Tex., on concrete designing and some steel designing and checking; concrete designs include substructures for three steel bridges on Dallas-Terrel Interurban; the steel designs include 120-ft. steel span with 18-ft. roadway (concrete floor, and live load two 15-ton trucks); one-half of time on estimating and bidding on jobs; two-fifths of time detailing and checking concrete and steel, making plans and working up bills of materials, and remainder of time designing or checking designs. (Active practice 5.5 years: Res. Ch. 3.5: Design 0.5). Refers to J. W. Jones, A. C. Love, J. C. Nagle, J. J. Richey, V. H. Smith, C. L. Williford, J. F. Witt.

FOR ADMISSION

- BRIGHAM, JOHN CHESTER—City Hall, Summit, N. J.—(Age 39. Born Ossining, N. Y.) (C. E., Cornell Univ., 1908.)—June to Sept. of years 1906 and 1907 Drafting Room Asst., 291 American Bridge Co., Brooklyn and New York City, tracing and detalling structural steel: Aug. 1908 to April 1909 Jun. Draftsman, Public Service Comm. of New York State, 1st Dist. (New York City): April 1909 to May 1913 Eng. Inspector, Board of Water Supply, New York City, on construction of Catskill Aqueduct, Southern Aqueduct Dept., inspection of construction, also office and field work: May 1913 to June 1919 Jun. Engr. and Asst. Engr. in charge of Section, Public Service Comm. of New York State, 1st Dist., subway construction; as Sec. Engr. in responsible charge of Route 5, Sec. 13 of Lexington Ave. Subway (\$4 000 000 contract) including preparation of final estimate and determination of contractor's claims: June 1919 to date City Engr., Summit, N. J., in responsible charge of all municipal engineering work involving design and construction of sanitary and storm water sewers, sewage pumping station, streets, pavements, parks, etc. (Active practice 14.6 years: Res. Ch. 7.5: Design 3.7). Refers to R. T. Betts, A. E. Clark, C. M. Everett, W. E. Fuller, G. G. Honness, R. Ridgway, C. D. Searle.
- CADY, RALPH HOWE—P. O. Box 733, Havana, Cuba—(Age 29. Born Sault Ste. Marie, Mich.) (B. S. in Eng., Univ. of Mich., 1918.)—Oct. 1916 to Sept. 1917 Engr. Asst., 292 Michigan Northern Power Co., Sault Ste. Marie, Mich., inspection pneumatic caisson foundation work in repair of power-house, canal gauging and hydraulic problems, (1) investigation of compensating works control of Lake Superior levels, railway and land survey: July 1918 to Jan. 1919 1st class Sergt., U. S. Army, Eng. Sec., San. Corps, about 5 months in charge experimental work on waste disposal, Ft. Meyer, Va.; 2d Lieut., same service (nearly 3 months) in charge water supply and waste disposal, Payne Field, Miss.: Feb. 1919 to June 1920 Asst. Engr. with Hoad & Decker, Cons. Engrs., Ann Arbor, Mich., collaborated on design of filtration plant and pumping station for City of Highland Park, Mich., field work and design for sewerage for cities of Owosso, Muskegon, Muskegon Heights and Ann Arbor, Mich., water supply for cities of Owosso and Plymouth, Mich., and other minor works; last 6 months Designing Engr.: July 1920 to date Asst. Engr., Frederick Snare Corporation, Contr. Engrs., New York City and Havana, Cuba, designing and construction engineering for Havana office; design of reinforced concrete foundations and pier of Ward Line Terminal in Havana Harbor, and other works including reinforced concrete and steel buildings, warehouses, wharves and piers involving expenditures of several million dollars; last 6 months Engr. in charge reconstruction reinforced concrete packing house and pier and construction new reinforced concrete pier at Mariel, Cuba. (Active practice 5.6 years: Res. Ch. 3.7: Design 3.1). Refers to A. J. Decker, W. R. Drury, W. C. Hoad, O. M. Jones, G. P. Seeley, Jr.
- CARSWELL, CHARLES—816 Widener Bldg., Philadelphia, Pa.—(Age 24. Born Wilmington, Del.) (B. S. in C. E., Univ. of Del., 1920.)—June to Sept. 1917 Rodman, and June 293 to Sept. 1918 Rodman and Instrumentman, Street and Sewer Dept., Wilmington, Del.: June to Sept. 1919 Instrumentman and Draftsman, County Engr.'s office, New Castle County, Del.: June 1920 to July 1921 Detaller, American Bridge Co., Pencoyd, Pa.: July to Aug. 1921 Detaller, Merchant Shipbuilding Corporation, Chester, Pa.: Sept. 1921 to date Jun. Engr., Asst. to Prin. Asst. Engr., Delaware River Bridge Joint Comm., Philadelphia, Pa. (Active practice 2.8 years). Refers to C. E. Chase, E. M. Hoopes, Jr., L. S. Moisseiff, E. Pollitt, G. S. Webster.
- CLARK, CHARLES SAMUEL—407 Phelps Bldg., Binghamton, N. Y.—(Age 30. Born Binghamton, N. Y.) (C. E., Lafayette Coll., Easton, Pa., 1916.)—July to Sept. 1916 in 294 office of U. S. Realty Co., New York City: Sept. 1916 to March 1917 Inspector on intercepting sewer, City of Binghamton: March 1917 to Dec. 1918 Asst. Supt., Rolling Mills (3) Patented "Grey" Mill, Bethlehem (Pa.) Steel Co.: Dec. 1918 to May 1919 Ensign, aviation, U. S. Navy: May 1919 to Jan. 1920 in estimating and Structural Sales Dept., Bethlehem Steel Co.: Jan. to Sept. 1920 Asst. City Engr., Binghamton: March 1921 to date member of firm, Clark Constr. Co. of Binghamton, Contrs., especially on reinforced concrete construction, such as heavy foundations, creek channels, buildings, etc.; has handled approx. \$100 000 worth of work annually having complete charge. (Active practice 6.3 years: Res. Ch. 3.2: Design 1.6). Refers to J. A. Giles, R. B. Hoadley, Jr., A. L. LaRoche, E. H. Prentice, W. E. Weller.
- CLAYBOURN, JOHN GERONOLD—Box 44, Pedro Miguel, Canal Zone, Panama—(Age 36. Born Albert Lea, Minn.)—Student, Academic Coll. (1906 to 1907), and Eng. Coll. (1907 295 to 1908 and 3 months in 1909 and 1910), Univ. of Minnesota: 1910 to 1911 (5 months)

FOR ADMISSION

- Rodman, and 1911 to 1913 (2 years) Levelman, Isthmian Canal Comm.: 1913 to 1914 (1) (1 year) Transitman, Isthmian Canal Comm., in charge of engineering field work, Atlantic Office, Dredging Div., and 1914 to 1917 (2½ years) Transitman, Panama Canal, on same work: 1916 to 1918 (1½ years) Jun. Engr., Panama Canal, in charge hydrographic surveys, Gatun Lake, triangulation and mapping (6 months), and of dredge and engineering work, field and time offices, Balboa, Pacific Terminal, and Cristobal, Atlantic Terminal (8 months): 1918 to 1923 (nearly 4 years) with Panama Canal, 3 months as Asst. Engr. on supervision of dredging fleet Eng. Corps of Atlantic and Pacific Entrances, including repairs and improvements to equipment, estimates, reconnaissance on dredging work; then (9 months) Asst. Engr. on same work and in charge of gravel production and transportation by water, immediate charge of water hyacinth and other noxious plant extermination; in 1919 and 1920 (1 year) Asst. Engr. in immediate charge of all field and office engineering work of the Division, also dredge fleet at Atlantic and Pacific Entrances of the Canal and immediate supervision of all dredging on the Canal; during 1920-1923 Asst. Engr. on same work (nearly 2 years), and Acting Supt. (9 months) and Supt. of Dredging (4 months), performing all dredging (including disposal of spoil), sluicing, ditching, drilling and blasting, in connection with Canal channel and terminal harbor maintenance and improvement; slide removal and prevention; reclamation of land by hydraulic filling; production, storage and handling of sand and gravel; removal of water hyacinths and other noxious plants from the canal and tributary waters; collection and disposal of driftwood in the canal; making and charting of hydrographic surveys of the canal and harbors; topographic surveys in connection with ditching and dredging projects; maintenance and operation of dredging equipment; tug boat fleet, 250-ton cranes, *Ajax* and *Hercules*, and craneboat *La Valley*, and other equipment for the work. (Active practice 12.5 years: Res. Ch. 7.6: Design 6.2). Refers to G. V. Barril, G. C. Bunker, O. E. Malsbury, J. J. Morrow, M. L. Walker.

CLEVER, WILLIAM—287 Harmon St., Brooklyn, N. Y.—(Age 24. Born New York City.) (B. S. in C. E., Univ. of Pa., 1922.)—Aug. 1913 to 1915 (2 years) clerk, and 1915 296 to 1918 (3 years) and June to Sept. of years 1919 and 1920 Draftsman, American Bridge Co.: June to Sept. 1921 Draftsman, New York Edison Co.: June 1922 to date (1) Detaller, and some designing, American Bridge Co. (Active practice 3.7 years). Refers to H. C. Berry, W. G. Grove, M. S. Ketchum, F. C. Moore, S. J. Ott, B. B. Priest, J. E. Wadsworth.

CRUSE, WILLIAM ROY—City Engr.'s office, Jackson, Mich.—(Age 27. Born St. Joseph County, Mich.) (B. S. of C. E., Univ. of Mich., 1919.)—March to Sept. 1915 and June 297 to Oct. 1916 Instrumentman and Draftsman with Colman & Harding, subdivisions and road work: June to Oct. 1917 and June to Oct. 1918 Instrumentman and Draftsman on (7) surveys, and Dec. 1919 to April 1920 Asst. Engr. on maintenance, Advance Rumley Co.: April 1920 to June 1921 Asst. Engr. with Colman & Harding, on design of sewer system and septic tank, survey for dam location, design and estimates, etc., subdivision improvements, pavements, water, sewer, etc.: Nov. to Dec. 1922 Inspector of asphalt paving, under City Engr., Hamtramck, Mich.: Jan. 1923 to date Asst. Engr., City of Jackson, Mich., on survey of Grand River through Jackson, including design of dike-walls, etc., also designing necessary streets and bridges to reclaim the adjoining land. (Active practice 2.4 years: Res. Ch. 0.9: Design 0.3). Refers to J. B. T. Colman, L. M. Gram, D. M. Hatch, W. C. Hoad, H. E. Riggs, F. L. Weaver.

DAUCHY, FREDERICK BURR—City Engr.'s Office, Riverside, Cal.—(Age 29. Born Topeka, Kans.)—June to Dec. 1914 Rodman and Chainman, and Oct. 1915 to June 1916 Rodman 298 and Transitman, Riverside County (Cal.) Highway Comm.: Jan. to Oct. 1915 Draftsman and Hydrographer, City of Riverside, Cal.: Sept. 1916 to Sept. 1917 Draftsman and (11) Transitman with Kingsbury Sanborn, Cons. Engr., Riverside: Jan. to April 1918 Transitman, and Jan. to Sept. 1919 Transitman and Chf. of Party, Los Angeles County Flood Control Dist.: Nov. to Dec. 1918 Sergeant Draftsman, U. S. Army: Oct. to Dec. 1919 Asst. to City Engr., Willows, Cal.: Jan. to March 1920 Transitman in charge of party, Southern California Edison Co.: April 1920 to date Draftsman and Office Engr., City Engr.'s office, Riverside. (Active practice 7.8 years: Res. Ch. 3.7). Refers to G. S. Hinckley, W. D. Larrabee, K. Sanborn, A. L. Sonderegger, H. E. Warrington, E. J. Waugh.

FOR ADMISSION

DAVIDSON, NORMAN HART—34 Clinton Ave., North, Rochester, N. Y.—(Age 29. Born Commonwealth, Wis.) (B. S. E., in Mech. Eng., Univ. of Mich., 1917.)—March 1917 to June 1918 Asst. Engr., Rochester (N. Y.) Gas & Elec. Corporation, engineering problems covering steel and reinforced concrete structures, machines, steam distribution (3) mains, valuation of water power rights and miscellaneous hydraulic problems: July 1918 to Jan. 1919 Private and Corporal, U. S. Army, student E. O. T. S., Camp A. A. Humphreys, Va.; Jan. 1919 commissioned 2d Lieut., Engr. Officers' Reserve Corps: Feb. 1919 to date Asst. Engr. (Hydr.), Rochester Gas & Elec. Corporation, engineering problems in connection with development of water powers in Western New York, in charge of design and construction of 500-h. p. hydro-electric station. (Active practice 5.8 years: Res. Ch. 1.2: Design 1.8). Refers to C. Benham, Jr., C. C. Covert, F. W. Fisher, F. J. Howes, H. W. King, W. G. Wildes.

DE LA GUARDIA, MARIO—537 West End Ave., New York City—(Age 22. Born Havana, Cuba.) (B. S. in Civ. Eng., N. Y. Univ., 1922.)—Aug. 1922 to date Structural Drafts-300 man, Purdy & Henderson Co., drafting and designing. (Active practice 0.5 year). (1) Refers to W. S. L. Cleverdon, A. Haring, E. G. Hooper, C. T. Schwarze, C. H. Snow.

DISKEN, JAMES FRANCIS—50 Court St., Brooklyn, N. Y.—(Age 48. Born Brooklyn, N. Y.)—July 1891 to Oct. 1898 and March 1908 to June 1911 in private practice as 301 Archt., Surveyor and Bldg. Constructor: Oct. 1898 to April 1903 Gen. Supt. and Engr. on several large operations, Louis Weber Bldg. Co.: April 1903 to July 1904 with Geo. A. (1) Fuller Co. as Supt. of Constr. on Hotel Breslin, New York City: July 1904 to July 1905 with Thompson Starrett Co. as Supt. of Constr. on U. S. Express Bldg., Hoffman House and Adelphia Theatre in Philadelphia: July 1905 to July 1907 Supt. of Constr. on several operations, John H. Deeves & Bro.: July 1907 to March 1908 with Long Beach Estates as Gen. Supt. and Engr., Nassau Hotel at Long Beach: June to Nov. 1911 Supt. of Constr. on public school with R. E. Henningham: Nov. 1911 to March 1912 with P. J. Brennan & Son as Supt. of Constr. on engine house, Far Rockaway: March 1912 to Oct. 1919 with Albert Wintermute as Gen. Supt., Engr. and Estimator on construction of Greenpoint and New Cumberland Hospitals and elevator storehouse, Welfare Island: March to Dec. 1920 with W. H. Whyte Constr. Co. as Gen. Supt. and Engr., Oradell (N. J.) Isolation Hospital: Dec. 1920 to date member of firm and Secy., Werner-Diskens Co., Inc., Brooklyn, N. Y.; Gen. Supt. and Engr. on building construction: has been in charge of all work. (Active practice 31 years: Res. Ch. 31). Refers to A. Geist, S. Herzig, L. G. Mertz, Jr., H. Nagin, J. R. O'Donnell.

DRESSLER, ROLDON FRANKLIN—208 S. La Salle St., Room 1823, Chicago, Ill.—(Age 28. Born Medina, Ohio.) (A. B., Wittenberg Coll., 1914.)—June 1914 to Oct. 1915 Drafts-302 man, Wm. Bayley Co., Springfield, Ohio, structural steel and ornamental iron detailing: Oct. 1915 to Aug. 1918 on reinforced concrete design and detailing, Truscon Steel Co., (8) 1 year at Youngstown office, and 1½ years at Chicago office: Aug. 1918 to Feb. 1919 Designer, Industrial Bldg. Co., Chicago: Feb. 1919 to date reinforced concrete and steel design, Calumet Steel Co., Chicago, Ill.: 1921 passed Structural Engineers' examination, Illinois State Board of Registration and Education. (Active practice 8.7 years: Res. Ch. 4: Design 4.7). Refers to R. P. Durham, L. J. Mensch, J. A. Scanlan, T. R. Shaver, E. B. Wilson.

ECKLES, ROBERT ARTHUR—L. S. & T. Bldg., New Castle, Pa.—(Age 25. Born New Castle, Pa.) (S. B., Mass. Inst. Tech., 1921.)—June to Sept. of years 1917 and 1919 303 drafting, and June to Sept. 1920 structural designing and superintending, with W. G. Eckles, Archt.: May 1921 to date structural designing, specification writing, super- (6) vision of construction, designing heating and ventilating systems and electric systems for buildings, investigated old buildings and reported on their condition, and since Jan. 1922 member of firm, W. G. Eckles Co., Archts. (Active practice 1.6 years: Res. Ch. 1.6). Refers to H. E. Eckles, T. A. Gilkey, E. Godfrey, H. W. Hayward, C. M. Spofford.

EDLUND, LAWRENCE LINNE—7556 Eberhart Ave., Chicago, Ill.—(Age 31. Born Chicago, Ill.) (B. S., 1916, and C. E., 1920, Armour Inst. Tech.)—July 1912 to March 1913 304 drafting and office work in Bridge and Bldg. Dept., Chicago, Milwaukee & St. Paul Ry., Chicago: April to Dec. 1913 Draftsman and Detailer on industrial building design with (8) Brill & Gardner, Industrial Engrs., Chicago: June to Aug. 1914 surveying and inspecting concrete building construction with Gardner & Lindberg, Engrs., Chicago: May 1916

FOR ADMISSION

to date with Gardner & Lindberg as follows: May 1916 to June 1917 supervising construction of industrial plants, including mill-constructed meat-canning plant, and installing of insulation and refrigerating equipment in large cold-storage warehouse; July 1917-May 1918 responsible for office work in layout and design of meat-packing cold-storage and other industrial plants; June 1918 to Feb. 1919 Asst. Supt. on reconstruction of large brewery into meat-packing and cold-storage plant, in charge of mechanics and other field forces; jointly responsible for design, purchasing and field methods; March 1919 to Dec. 1922 responsible for office work in layout, design, specifications and estimates of industrial plants, including other branches of engineering entering into the design: Jan. 1923 to date Chf. Draftsman in charge of office work on design of industrial plants. (Active practice 8.5 years: Res. Ch. 2.1: Design 4.6). Refers to W. D. Gerber, A. R. Lord, A. E. Phillips, J. H. Prior, W. S. Tait.

EMANS, KARL—35 Wadsworth St., Geneseo, N. Y.—(Age 22. Born Cologne, Germany.) (B. S. in C. E., N. Y. Univ., 1922.)—June to Oct. 1918 Machinist, Gen. Elec. Co., at 305 Erie, Pa., production work on torpedo boat turbines: June to Oct. 1919 Asst. Foreman on bridge construction, and June to Oct. 1920 Field and Office Engr., maintenance and construction, Baltimore & Ohio R. R., at St. George, N. Y.: July to Sept. 1921 installation of machinery and equipment of Eng. Bldg., New York Univ., machine work and Millwright: June 1922 to date Asst. to Min. Engr., Sterling Salt Co., at Cuylerville, N. Y., civil and mining engineering, field and office, structural steel, reinforced concrete, water supply, track layouts, surface and mine surveying, checking and originating designs, drafting and supervision of construction. (Active practice 0.7 year). Refers to W. S. L. Cleverdon, J. T. Fetherston, E. G. Hooper, C. T. Schwarze, C. H. Snow.

FOLEY, ALBERT EDWARD—209 Meadow Ave., Charleroi, Pa.—(Age 33. Born Tyrone, Pa.)—July 1908 to Sept. 1910 Asst. Master Mechanic, Lehigh Coal & Navigation Co., 306 Lansford, Pa., in charge of repair and maintenance of mining machinery and equipment: Sept. 1910 to Oct. 1913 Supt., Parson Constr. Co., Brownsville, Pa., in charge of railroad grading, bridges, state, county and city paving: Oct. 1913 to May 1914 Supt. for Reed, Liggett & Britt, Washington, Pa., in direct charge of county paving work for Washington County, Pa.: May 1914 to Jan. 1917 Gen. Supt., Parson Constr. Co., in charge of heavy concrete and masonry, grading, steel erection, also on design of various structures: Jan. to April 1917 Master Mechanic in charge of repair of equipment, Smith-McCormick Co., Easton, Pa.: April 1917 to May 1919 Corporal, Sergeant and First Sergeant, U. S. Engrs., had charge of some difficult pieces of engineering and construction: May 1919 to date Gen. Supt. and Secy., T. J. Foley Co., Pittsburgh, Pa., on design and erection of warehouses, ice plant, store, in charge of maintenance camps, commissaries and different contracts with Pennsylvania R. R., Panhandle Div., Pittsburgh. (Active practice 14.4 years: Res. Ch. 14.1: Design 4). Refers to J. T. Barr, P. Didier, W. M. Donley, C. D. Loveland, R. R. Nace, A. D. Needl.

GENNET, CHARLES WESCOTT, Jr.—2200 Insurance Exchange, Chicago, Ill.—(Age 46. Born Binghamton, N. Y.) (M. E., Cornell Univ., 1898.)—1898 to 1899 (1 year) Draftsman, Baldwin Locomotive Works: 1899 to 1908 (8½ years) Inspector of Materials, Southern Ry. Co., Test Dept.: 1908 to date (14¾ years) with Robert W. Hunt & Co. as (8) Managing Engr. in charge of inspection, etc., of rails and fastenings, visiting mills in supervisory capacity to see the inspection of rails, etc., frequently investigating and reporting on condition of rails, etc., in service, visiting railroad officers on matters involving specifications, use of rails, etc. (Active practice 24.2 years). Refers to J. L. Harrington, E. T. Howson, C. F. Loweth, H. McDonald, A. F. Robinson, A. N. Talbot.

GILLIES, JAMES IRVING—Amityville, N. Y.—(Age 36. Born Brooklyn, N. Y.)—1906 to 1908 (over 2 years) Rodman, then Inspector of construction, Pennsylvania Tunnels and 308 Terminal: 1908 to 1912 (3½ years) Inspector Yards and Docks Dept., Navy Dept., Brooklyn Navy Yard and Newport, R. I.: 1913 to 1915 (2 years) Supt., concrete building construction, for Rufus H. Brown, Inc. (over 1 year) and for American Concrete Steel Co., Rufus H. Brown, Inc. (nearly 1 year): 1916 to 1917 (1 year) in fireproofing business: 1917 to 1919 (2 years) Supt. of Constr. of disposal plant of Metropolitan By-Products Co., on Staten Island, and later Gen. Supt. of operation: 1919 to 1920 (1½ years) Asst. Engr., American Smelting & Refining Co., Perth Amboy Plant: 1920 to 1922 (2 years)

FOR ADMISSION

Supt. of Constr. for Francisco & Jacobus: 1922 to date Supt., Bldg. Constr., J. H. Taylor Constr. Co. (Active practice 15.1 years: Res. Ch. 13). Refers to L. M. Cox, F. L. Francisco, H. B. Gates, F. R. Harris, J. F. Sullivan.

GIVEN, JAY ANKENY—Dunsmuir, Cal.—(Age 39. Born Peoria, Ill.) (B. C. E., Iowa State Coll., 1908.)—July 1908 to June 1909 Timekeeper and Asst. Extra Gang Foreman, 309 Union Pacific Ry.: July 1909 to Sept. 1910 Draftsman and Asst. Engr. M. of W., and Sept. 1910 to June 1916 and March to June 1917 Asst. Div. Engr., Southern Pacific Co., (13) at Sacramento, Cal.: June 1916 to March 1917 Capt. of Engrs., commanding Co. A, California Engrs. (under Major S. A. Cheney, Corps of Engrs.), on Mexican Border: June 1917 to Dec. 1918 Capt., Major and Lt.-Col. of Engrs., U. S. Army, with 117th Engrs., Rainbow Div., 10 months overseas: Jan. 1919 to date Div. Engr., S. P. Co., at Dunsmuir, Cal. (under Engr. of Maintenance), in charge of engineering and maintenance on Shasta Div. (Active practice 14.4 years: Res. Ch. 12.2: Design 12.2). Refers to T. A. Bedford, W. S. Caruthers, W. Kelly, W. H. Kirkbride, F. H. Tibbetts.

GOINES, LAURENCE ARCHIBALD—Yemassee, S. C.—(Age 36. Born New York City.)—(B. S. in Civ. Eng., Univ. of Wyo., 1912.)—June to Oct. 1909 Levelman, Arnold Co., 310 Chicago, on canal location: May to July 1910 Chf. of Party, Arnold Co., on canal and concrete construction, grades, alignments and monthly estimates on some work: (10) March 1912 to Aug. 1919 with Costilla Estates Development Co., San Acacio, Colo., as follows: March 1912 Levelman; March to Aug. 1912 Inspector in charge of construction of supply canal, reinforced concrete diversion dam, rating flume, headgates, eight masonry drops, about 6 miles main canal and four timber highway bridges: Aug. 1912 to Jan. 1915 and Oct. 1915 to April 1916 Office Engr. in charge topographic maps and canal and lateral system layout, designs of irrigation structures, including inverted concrete syphon under railroad, and syphon carrying canal under Costilla River, standard design for concrete canal drops and directed construction of about sixty, field details on concrete construction; Asst. to Supt. of Irrigation (one irrigation season and part of another); investigations, field and office, for proposed Costilla Reservoir, Taos County, N. Mex.; during latter period had additional responsibilities, and (4 months) acted as Supt. of Irrigation; Jan. to Oct. 1915 Inspector on production, in charge field operations Tie and Timber Dept., saw mills, tie and logging camps, log drives, tie drives; finances, shipping and transportation of products; April 1916 to March 1917 Asst. Engr. on construction, reinforced concrete and earthwork, field charge tie and timber operations; detailed on concrete work, Costilla Reservoir; Asst. to Supt. of Irrigation during irrigation season; March 1917 to June 1919 Chf. Clerk to Gen. Mgr. of Company and several subsidiary companies on executive work, including purchasing, accounts, land sales, operation, maintenance and construction; in full charge of the business for extended intervals during absence of Gen. Mgr.; June to Aug. 1919 Engr., Costilla Reservoir construction, representing the Company, in charge of the work, especially with reference to construction of upper portions of concrete controlling tower: Dec. 1919 to Nov. 1920 in private practice at Littleton, Colo., investigated and reported on proposed 100 000-acre irrigation project in Western Nebraska for private interests; also consulting service for Town of Ogallala, Nebr., extension of sewer system, codification and revision of existing ordinances regarding sidewalks, paving and general municipal improvements: Dec. 1920 to date Mgr. of South Carolina interests of C. W. Kress; development of about 11 000 acres, tile drainage, flood prevention, protection from tidewater overflow, investigation and experimentation on utilization of drainage tile system for subsurface irrigation, construction and operation of narrow gauge industrial railway, extensive building construction, reorganization of operating departments, extensive agricultural and livestock development and operations. (Active practice 10.4 years: Res. Ch. 9.5: Design 2.1). Refers to J. C. Fitterer, C. R. Hedke, R. I. Meeker, J. C. Ulrich, W. D. Waltman.

GOWEN, JOHN FELLOWS—28 Walnut St., Dobbs Ferry, N. Y.—(Age 33. Born Ossining, N. Y.) (A. B., Harvard Coll., 1911.)—June to Sept. 1910 Clerk, Peekskill Div., Board 311 of Water Supply, New York City, drafting, etc.: July to Oct. 1911 Computer and Estimator in office of Henry Steers, Inc., Contrs., chiefly taking off quantities on dock (1) work: Oct. 1911 to Jan. 1912 Inspector, Board of Water Supply, Catskill Aqueduct, Peekskill Div., in charge of mixer on Sprout Brook Syphon: Jan. 1912 to Sept. 1913 Asst. Engr., City Div., Catskill Aqueduct, 4 months on tunnel inspection, then in office of Div. Engr. on design, etc.: Sept. 1913 to Nov. 1914 Asst. Engr., Holbrook, Cabot &

FOR ADMISSION

Rollins Corporation, on 5 miles of city tunnel, chiefly office work, design of forms, etc., shipment of materials: Nov. 1914 to Aug. 1921 Asst. to Mgr., Smith, Hauser & MacIsaac, Inc., Contrs., in charge of steel for William St. Subway Contract, design of all plant, later in charge of design and materials, subcontractors, etc., on various large contracts: Aug. 1921 to March 1922 in private practice as Engr. and Archt., designed coal bins, small factories, etc., and drew plans for and supervised erection of houses, apartments, stores, etc.: March 1922 to date Architectural Engr. in charge of Bldg. Service Dept., Copper & Brass Research Association, New York City, on educational publicity and research in use of copper in building construction: March 1912 to date also member of firm, Applebee & Gowen, Associated Archts., Ossining, designed and supervised construction of \$500 000 worth of buildings. (Active practice 11.3 years: Res. Ch. 11: Design 11). Refers to C. Gilman, R. W. Greenlaw, H. M. Hale, C. M. Holland, R. Ridgway, L. White.

HALEY, FREDERIC WILLIAM—58 Wales Pl., Dorchester, Mass.—(Age 29. Born Haverhill, Mass.)—May 1912 to April 1916 Rodman and Transitman for John T. Desmond, 312 C. E., Haverhill, Mass., on engineering and surveying: April 1916 to date (except June 1918 to Jan. 1919 Private, U. S. Army, at Camp Devens) Asst. Engr. for F. A. Barbour, (2) C. E., Boston, Mass., as Res. Engr. on sewer, concrete and sewage-disposal plant construction; conducted field surveys and investigations in water power and water supply problems, and at times in office designing, estimating and drafting. (Active practice 11 years: Res. Ch. 7: Design 1). Refers to F. A. Barbour, H. H. Chase, G. G. Dixon, F. A. McInnes, J. E. Palmer.

HAVELIN, JULIUS EDWARD—956 Fifty-seventh St., Brooklyn, N. Y.—(Age 22. Born New York City.) (C. E., Cornell Univ., 1922.)—July to Aug. 1922 Rodman, Dept. of 313 Sewers, Borough of Queens, N. Y.: Aug. 1922 to date Topographical Draftsman, Dept. of Docks, New York City, on design, making layout for interior islands in Jamaica Bay. (1) (Active practice 0.9 year: Design 0.8). Refers to H. R. Asserson, F. A. Barnes, T. F. Keller, H. N. Ogden, J. E. Perry, F. J. Seery.

HENDRICKSON, BERTRAM HIGBIE—Box 847, Brownsville, Tex.—(Age 30. Born New York City.) (B. S., Cornell Univ., 1915.)—May 1916 to Oct. 1917, July 1919 to April 314 1920 and May 1921 to date Scientist in Soil Survey, Bureau of Soils, U. S. Dept. of Agriculture, Washington, D. C., on investigation, classification and mapping of soils in (15) field in various states; comprehensive reports are prepared and published with soil maps (the maps are of use to civil engineers in connection with location of roads, road building materials, etc.); had charge of a party in Uinta Area, Utah: Oct. 1917 to July 1919 Master Engr., Senior Grade; Chf. Topographer, 312th Engrs., U. S. Army, reviewed surveying, higher surveying, learned military mapping, reconnaissance and sketching, organized material and taught regimental school: Nov. 1918 graduated, Engr. Officers' Candidate School, Langres, France. (Active practice 5.7 years). Refers to A. E. Anderson, V. L. Conrad, H. B. Livingston, J. R. Slattery, E. E. Teeter, W. O. Washington.

HITCHCOCK, CHARLES HENRY—135 E. Durham St., Mt. Airy, Pa.—(Age 49. Born Philadelphia, Pa.)—1891 to 1900 (9 years) Chainman, Rodman, Transitman and 315 Inspector, Philadelphia & Reading Ry. Co.: 1900 to 1901 (nearly 1½ years) Constr. and Location Engr., Cuban Steel Ore Co., at Chiririco, Cuba, on railroad, including (4) bridges, viaduct, shops and steel loading pier: Nov. 1901 to date Draftsman and Asst. Engr., P. & R. Ry. Co., on preliminary work in advance of construction of Ninth St. Elev. and Richmond Branch Elev., Philadelphia (2 years); preliminary survey, Westwood Switch to Shamokin, 2 routes (40 miles each) (6 months) and of line of railroad from Blandon on East Penn R. R. to Sinking Spring on Lebanon Valley Branch, with connection (17 miles) (6 months); construction and design of Ninth St. Elev. from Green St. to Richmond Branch, and Richmond Branch Elev. from Somerset St. to Richmond St., Philadelphia (8 years), and of Low-Grade Freight Line at Wayne Junction, Philadelphia (3 years); four-tracking Reading Terminal R. R. from Green St. to Callowhill St., Philadelphia (2 years); construction and design, elimination of grade crossings from Philadelphia, Newtown & New York R. R., at Olney, Pa. (2 years); construction and design of opening of Tulip and Emerald Sts., Philadelphia, with engine yard facilities at Erie Ave. Yard, and at Tulip St. Yard, Philadelphia (7 years); also charge of construction of thirteen bridges in vicinity of Harrisburg, including

FOR ADMISSION

46-span double-track concrete arch bridge (about 3 500 ft. long; under construction) (past 3 years). (Active practice 38.3 years: Res. Ch. 22.3: Design 7). Refers to C. Dillenbeck, J. F. Murray, A. E. Owen, S. T. Wagner, G. S. Webster.

HORTON, GEORGE LAFLIN—1105 Mercantile Trust Bldg., Dallas, Tex.—(Age 49. Born Westfield, Mass.)—March 1899 to Dec. 1900 Mgr., Isabella Lead & Zinc Co., Joplin, 316 Mo., on installation and operation of mills and mines: Jan. 1901 to Nov. 1907 from Auditor to Asst. Mgr. for Johnston Bros., St. Elmo, Ill., on construction of 800 miles (15) of railroad; at intervals in responsible charge: Jan. 1908 to Feb. 1910 Gen. Mgr., Trinidad Elec. Ry. Co. and Trinidad Light & Power Co., Trinidad, Colo., in responsible charge of construction of power plant, railroad and transmission lines: March 1911 to June 1912 designing and locating irrigation projects in Colorado, and July 1912 to Jan. 1913 designing and installing irrigation pumping plants in Colorado and New Mexico, D. W. Stone, Glendale, Cal.: Feb. to Sept. 1913 Dist. Engr. Cameron County, Tex., Drainage Dist. No. 3: Sept. 1913 to date Levee and Drainage Contr. (Active practice 22.6 years: Res. Ch. 16.7: Design 6.6). Refers to L. A. Gueringer, R. E. Miller, E. N. Noyes, A. A. Stiles, R. W. Willard.

HOTT, SABERT ALFRED—Medford, Okla.—(Age 33. Born Hillsboro, Iowa.) (A. B., and B. S. in C. E., Okla. State Univ., 1914.)—Aug. 1915 to date County Engr., Grant County, 317 Okla., planning, designing and supervising building of 298 miles of earth road and about two hundred concrete culverts and sixty-five steel and concrete bridges (16 ft. to 589 ft. (15) long); past 6 years also County Surveyor. (Active practice 7.5 years: Res. Ch. 7.5: Design 7.5). Refers to M. L. Cunningham, P. H. Everhard, F. R. Hoover, D. H. Jones, L. O. Marden, J. I. Tucker.

IRONS, JAMES PROUDFIT—Garnett, Kans.—(Age 26. Born Topeka, Kans.)—1915 to 1917 student, Dept. of Eng., Washburn Coll., Topeka, Kans.: June to Sept. 1916 Chainman and Rodman, Valuation Dept., Atchison, Topeka & Santa Fe R. R., Topeka, Kans.: Dec. 1916 to April 1917 Draftsman, Perfection Sheet Metal Works: April 1917 to May (14) 1919 with U. S. Army, first as Private, Co. A, Engrs., Kansas National Guard, and finally 1st Lieut., Corps of Engrs., Camp Funston, Kans.; 1 year with A. E. F.: June 1919 to April 1920 on design and preparation of highway plans, Shawnee Eng. Co. (Inc.), Topeka: April to May 1920 Designing Engr., Road Supply & Metal Co., Topeka: May 1920 to date County Engr., Anderson County, Kans., at Garnett, Kans., in direct charge of construction on 30 miles Federal Aid highways. (Active practice 6.1 years: Res. Ch. 4.6: Design 1.3). Refers to C. M. Buck, W. V. Buck, S. A. Cheney, H. W. Crawford, F. W. Epps, R. A. Finney, L. A. Hunt, G. L. McLane, L. P. Scott, E. M. Stayton, L. R. Tillotson, M. W. Watson.

JACOBI, ALFRED FRED—1406 Gen. Taylor St., New Orleans, La.—(Age 27. Born Philadelphia, Pa.)—Sept. 1914 to June 1915 Chainman, Topographical Bureau of Queens, 319 New York City, in field triangulation party, on chain and instrument work: June 1915 to Sept. 1916 Jun. Asst., New York State Highway Comm., Div. No. 5, Binghamton, (15) N. Y., Instrumentman on location and staking out, Inspector on construction and Checker in office: Sept. 1916 to July 1917 student at Night Coll., Brooklyn Polytechnic Inst.: July to Oct. 1917 Jun. Asst., Public Service Comm., New York City, Instrumentman on subway construction, also inspection of construction: Oct. 1917 to Feb. 1918 Asst. Engr., North Dakota State Highway Comm., Bismarck, N. Dak., in charge of locating party, and in office, plotting notes and preparing estimates: Feb. 1918 to April 1919 Instrumentman, Bureau of Yards and Docks, U. S. Navy, in charge of party on survey and mapping of naval station at Algiers, La., and of field party at naval base, Norfolk, Va., on construction, dredging, bulkheads, sewers, paving, etc.: April 1919 to Oct. 1920 Res. Engr. with Moreland & Bennett, Cons. Engrs., Pine Bluff, Ark., in responsible charge of highway locating parties and of highway construction; also on paving, drainage districts, etc.: Oct. 1920 to July 1922 Bridge Engr., Louisiana State Highway Comm., New Orleans, La., in responsible charge of all bridge design, including standard culverts and concrete slab and girder bridges, steel truss bridges (up to 225-ft. span), draw spans, estimates and field inspection: July 1922 to date Designer of timber wharves, steel warehouse sheds, cargo-handling equipment, etc., Board of Comm., Port of New Orleans. (Active practice 7.6 years: Res. Ch. 1: Design 2.3). Refers to F. Bennett, J. B. Converse, R. W. Davis, W. T. Hogg, F. A. Muth, S. M. Young.

FOR ADMISSION

JACOBSON, HERMAN HARRY—11 Meserole St., Brooklyn, N. Y.—(Age 22. Born Jassy, 320 Rumania.) (B. S. in C. E., Cooper Union, 1922.)—Refers to H. R. Codwise, F. E. Foss, (1) J. C. Riedel, C. T. Schwarze, J. P. J. Williams.

JOHNSON, BENJAMIN OLIVER—Livingston, Mont.—(Age 44. Born Winchester, Mass.) (B. S., Worcester Pol. Inst., 1900.)—July 1900 to June 1904 with Northern Pacific Ry. 321 as follows: July to Dec. 1900 Section Laborer; Dec. 1900 to Feb. 1901 Rodman; Feb. to March 1901 Leveler; March 1901 to Nov. 1902 Asst. Engr. M. of W., ballasting, (12) rail-relaying, concrete bridges, line changes both location and construction; Nov. 1902 to June 1904 Roadmaster, Fourth Dist., Yellowstone Div., ballasting, riprapp, brush facine work, track maintenance: June 1904 to April 1905 Roadmaster, Middle Dist., Illinois Div., Atchison, Topeka & Santa Fe Ry., Chilleothe, Ill., track maintenance and double track construction: April 1905 to Oct. 1917 with N. P. Ry., until May 1908 as Trainmaster, Yellowstone Div., miscellaneous transportation; then Constr. Trainmaster, Rocky Mt. Div., in charge of transportation in connection with heavy double-track construction; and after July 1908 Div. Supt., Yellowstone Div. (July 1908 to Aug. 1911), Fargo Div. (Aug. 1911 to June 1912) and Montana Div. (June 1912 to Oct. 1917), general direction of transportation and maintenance of way and structures, under divisional system of organization: Oct. 1917 to Jan. 1919 Major, Jan. to Dec. 1919 Lt.-Col. and Dec. 1919 to Jan. 1923 Col., Russian Ry. Service Corps, on reconstruction of bridges and removal of obstructions in connection with military operations in Siberia (1918), and reorganization, systematization, Trans-Siberian Ry. and direction of troop movements (1919–1922). (Active practice 22.4 years: Res. Ch. 21.9: Design 4). Refers to A. M. Burt, M. F. Clements, W. L. Darling, A. W. French, J. W. Kendrick, F. O. Price, J. F. Stevens, L. Yager.

JONES, JOHN EARL—Columbia, N. J.—(Age 44. Born Neillsville, Wis.) (B. Sc. in Civ. Eng., 1903, and C. E., 1906, Rutgers Coll.)—June 1903 to Sept. 1908 with Pennsylv. 322 vania R. R. Co., as Rodman, drafting, chaining, inspecting, instrument work and Engr. in charge of construction of two bridges over New York, Susquehanna & Western R. R. (4) and Northern R. R. of New Jersey, at Bergen Hill, N. J. (cost approx. \$75 000) and improvements at Snake Hill (cost approx. \$90 000): Sept. 1908 to Sept. 1910 Concrete Inspector, Delaware, Lackawanna & Western R. R. Co., on concrete arch bridge over Delaware River at Slateford, Pa.: Sept. 1910 to March 1911 Supt. of Constr., Smith, McCormick Co., Easton, Pa., on substructure of bridge over Chemung River near Corning, N. Y., for electric railway: May 1911 to May 1913 Supt. of Constr., Talbot Constr. Co., Contrs., on Yardley Viaduct over Delaware River (fourteen 90-ft. double-track arch spans, cost approx. \$330 000): May 1913 to Feb. 1920 Supt. of Constr., and last 2 years also Secy. and Engr., F. M. Talbot Co., Contrs., supervised the following work: Martins Creek Viaduct of D. L. & W. R. R. Co., at Kingsley, Pa., consisting of seven 150-ft., two 100-ft. and two 50-ft. 3-track concrete arch spans; also two small bridges and a culvert (cost approx. \$750 000); Sec. No. 2 of Orange (N. J.) Elevation of D. L. & W. R. R. Co., consisting of seven concrete bridges, foundations for Highland Ave. Station and for express and freight buildings, freight platforms and retaining walls, designed the centering, forms and layout of track and plant for this (cost approx. \$240 000); protection of foundations of Passaic River Draw Span of P. R. R. Co., at Newark, N. J., consisting of driving steel sheeting around Pivot Pier and on faces and ends of two rest piers and protecting this by driving timber (12 by 12 in.), bracing and facing with 4-in. plank and bolting all to the piers (under traffic); small bridges, turntable, bridge fenders, pils, buildings, etc., for P. R. R. Co. (cost approx. \$225 000); during 1918 Cons. Engr. for Columbia Delaware Bridge Co., during repairs to bridge over Delaware River between Portland, Pa., and Columbia, N. J.: 1920 to date (2½ years) Supt. of Constr., Bush Roberts & Schaefer Co.; constructed Pine St. Bridge over Chemung River at Corning, N. Y., for City of Corning (seven 92-ft. concrete arch spans with 36-ft. roadway and two 6-ft. overhanging sidewalks); also designed centering, forms, layouts for construction, equipment and made estimates for bids on contract work (bridge cost approx. \$229 000). (Active practice 19 years: Res. Ch. 11.9: Design 1.8). Refers to L. Bush, A. B. Cohen, B. H. Davis, G. T. Hand, C. A. Mead, J. F. Murray, G. J. Ray, W. R. Roberts.

JORDAN, SAMUEL ARTHUR—624 Rockdale Ave., Cincinnati, Ohio—(Age 50. Born Corunna, Ind.) (C. E., Ohio Northern Univ., 1894.)—Aug. 1898 to date with Baltimore 323 & Ohio R. R. as follows: Aug. 1898 to Sept. 1902 Draftsman, Chicago Div.; Sept. 1902

FOR ADMISSION

- to Jan. 1903 Asst. Engr., Bridge Dept.; Jan. to May 1903 Draftsman, Cleveland Div.;
- (9) May to July 1903 Asst. Div. Engr., Wheeling Div.; July to Dec. 1903 Asst. Div. Engr., Butler Div.; Dec. 1903 to June 1904 Div. Engr., Wheeling Div.; June 1904 to Sept. 1907 Div. Engr., Cleveland Div.; Sept. 1907 to Feb. 1908 Div. Engr., Philadelphia Div.; Feb. 1908 to April 1914 Engr. M. of W., Main Line Dist., at Baltimore, Md.; April to Dec. 1914 Supt., Shenandoah Div.; Dec. 1914 to Oct. 1918 Asst. Supt., Baltimore Div.; Oct. 1918 to Nov. 1920 Engr. M. of W., Eastern Lines; since Nov. 1920 Engr. M. of W., Western Lines. (Active practice 24.5 years: Res. Ch. 19.6: Design 4.9). Refers to R. N. Begien, G. D. Brooke, A. R. Carver, H. A. Lane, E. Stimson.
- KANG, SHIH-CHENG—408 West 115th St., New York City—(Age 27. Born Shanghai, China.) (B. S. in C. E., Nanyang Univ., Shanghai, China, 1919; M. C. E., Cornell Univ., 1922.)—Nov. 1919 to June 1921 Detailer of steel structures, American Bridge Co., Trenton Plant; Aug. 1922 to date in New York office of same Company as Estimator and Designer of steel structures and (at times) Asst. to Designing Engr. (Active practice 1.7 years: Design 0.6). Refers to R. R. Graham, F. C. Moore, B. B. Priest, H. Ridgway, J. E. Wadsworth.
- KESTLY, JOHN JERRY—Nenana, Alaska—(Age 35. Born Kaukauna, Wis.) (B. S., Univ. of Ore., 1911.)—1911 to 1912 (1 year) Chairman and Rodman, and 1912 to 1918 (nearly 6½ years) Instrumentman, Southern Pacific Co., on railroad construction: 1918 to 1922 (nearly 3¾ years) Res. Engr., and 1922 to date (nearly 1 year) Asst. (12) Engr., Alaskan Eng. Comm., on construction of Alaska R. R. (Active practice 11.8 years: Res. Ch. 4.6). Refers to B. B. Boyd, F. H. Chapin, W. Gerig, W. Hood, F. Mears, H. P. Warren.
- KING, WARREN RAYMOND—37 Municipal Bldg., Chattanooga, Tenn.—(Age 34. Born Laramie, Wyo.) (B. S., Univ. of Utah, 1911.)—July 1911 to June 1912 Instrumentman, 326 Leveler and Draftsman, Oregon Short Line R. R. Co.; July 1912 to Sept. 1915 Jun. Engr., Office Engr., U. S. Geological Survey, hydrographic work; Oct. 1915 to March (10) 1919 Asst. Engr., Colorado Power Co., Denver, surveying, mapping, reports, design, and construction, also hydrographic work; April to Nov. 1919 Chf. of Party, U. S. Bureau of Public Roads, Denver office, on location and cost estimates of highways in Colorado; Dec. 1919 to Jan. 1923 with U. S. Geological Survey, 2 months as Engr., at Washington, D. C., on hydraulic and hydrometric calculations; then Hydr. Engr., Dist. Engr., Water Resources Branch, Nashville and Chattanooga, Tenn., in charge of hydrographic and hydrometric work in Tennessee, Kentucky and Alabama. (Active practice 11.6 years: Res. Ch. 3.7: Design 1). Refers to J. S. Bright, E. E. Grimes, N. C. Grover, W. E. Hall, J. C. Hoyt, G. H. Matthes, O. J. Miller.
- KINGSCOTT, LOUIS CLIFTON—916 W. Michigan Ave., Lansing, Mich.—(Age 24. Born Bear Lake, Mich.) (B. S. in E., Civ. Eng., Coll. of Eng. and Arch., Univ. of Mich., 1922.)—May to Oct. 1918 Asst. Chemist, Tidewater Portland Cement Co., inspection of reinforced concrete trestle construction, etc.; June to Oct. 1919 in charge of details (7) and placing reinforcing steel for H. G. Christman Co., construction of building at Olds Motor Works at Lansing, Mich.; June to Oct. 1920 Asst. Foreman, same Company, in general construction and details of power house for Michigan Industrial School for Women; Aug. to Oct. 1921 Carpenter, John Marshall & Son, on construction of form work on Elm St. Bridge at Lansing, Mich.; June 1922 to date Engr., H. G. Christman Co., until Sept. 1922 in charge of laying reinforcing steel during construction of Durant Motors of Michigan at Lansing; since then on general drafting and design of reinforced concrete structures. (Active practice 1.1 years: Res. Ch. 0.9: Design 0.5). Refers to J. H. Cissel, H. L. Conrad, L. M. Gram, W. J. Kingscott, F. N. Menefee, H. E. Riggs.
- LAYNE, LLOYD FRANKLIN—Box 1065, Memphis, Tenn.—(Age 31. Born Hurley, S. Dak.)—1907 to date with Layne & Bowler Co., Houston, Tex., as follows: 1907 to 1912 328 (5 years) in Machine Shop, Shipping Dept., Field Dept., Office, and as Salesman; 1912 to 1914 (2 years) water supply engineering and contracting; 1914 to 1920 (6 years) (10) Mgr. of water supply engineering and contracting; had direct supervision of engineering and contracting for guaranteed water supplies for many industries and municipalities, some of more important works completed being for Firestone Tire & Rubber Co., Akron, Ohio, Cities of Savannah, Ga., Houston and Galveston, Tex., and Montgomery, Ala.; since 1920 (3 years) Vice-Pres. of Company. (Active practice 16 years: Res. Ch. 9). Refers to C. S. Burns, R. S. Charles, J. G. Gordon, Jr., R. E. Hutchins, R. E. McDonnell, D. C. Miller,

FOR ADMISSION

LIMA, GUSTAVO—409 College Ave., Ithaca, N. Y.—(Age 25. Born Vieques, Porto Rico.) 329 (B. S. in C. E., Manhattan Coll., New York City, 1921; C. E., Cornell Univ., 1923.)—(3) Refers to F. A. Barnes, C. Crandall, H. N. Ogden, J. E. Perry, F. R. Theroux.

McCLASKEY, GEORGE GIBSON—501 Renkert Bldg., Canton, Ohio—(Age 42. Born Wheeling, W. Va.)—1901 graduated from Linsley Inst.: 1901 to 1903 (2½ years) Timekeeper 330 for L. G. Hallock, Wheeling, W. Va., at Tennent's Tunnel, Freeport, Ohio, B. & O. R. R.: 1903 to 1905 (2 years) Timekeeper, Ferguson Contr. Co., New York, on Clover Fork of Clinch Mt. Tunnel: 1910 to 1912 (2 years) Res. Engr., State Line Tunnel, and Bridge Inspector, Boston & Albany R. R., Boston, Mass.: 1912 to 1915 (3 years) Field Engr., Bridge Dept., Montour R. R., Pittsburgh, Pa.: 1915 to 1916 (1 year) Engr. in charge of repairs, Caranhan Tin Plate & Sheet Co., Canton, Ohio: 1916 to 1917 (1 year) Director of Public Service, City of Canton: 1917 to 1918 (1¼ years) Constr. Engr., Canton Sheet Steel Co., building three open hearth furnaces, soaking pit and bar mill: 1918 to 1920 (2 years) with R. Winthrop Pratt, Cleveland, Ohio, as Res. Engr. building Alliance and Ashland, Ohio, filtration plants: April 1920 to date member of firm, McClaskey & Reese, Canton, designed and supervised building of retaining wall and dredging of East Creek; designed sewage-disposal plant, Canton, and arch bridge for city and county. (Active practice 21.7 years: Res. Ch. 13.2: Design 2). Refers to W. H. Dittoe, E. D. Harshbarger, E. J. Landor, R. F. MacDowell, L. P. Winterhalter.

McLEAN, ROBERT—42 North Spring St., Bloomfield, N. J.—(Age 29. Born Melbourne, Australia.)—1915 to 1916 (1¼ years) Asst. Foreman, Watson Flagg Eng. Co., on 331 electrical installation in Public Service Terminal, Newark, N. J.: 1917 (6 months) Foreman, New York Constr. Co., on miscellaneous electrical installation: 1918 to 1919 (1) with 11th Engrs., U. S. Army, 10 months as Sergeant and 1st Class Sergeant, Co. E, in charge of building culverts, railroads, etc., and running lines for same, France, and 6 months 2d Lieut., Co. F, in charge of railroad construction, also large temporary theatre near Bordeaux: 1919 to date with Hegeman-Harris Co., until 1921 as Engr. and Asst. Supt. on construction of Karpen Bldg. (8 months) and Mallinson Silk Mills (8 months), in Long Island City, and Lincoln School of Teachers Coll., New York City (8 months); since 1921 Supt. in charge of construction of Federation Settlement Bldg. (7 months) and of J. L. Redmond residence (9 months), New York City. (Active practice 6.4 years: Res. Ch. 6.4). Refers to F. Bagge, H. W. Deakman, J. L. Jewell, W. B. Parsons, J. H. Wells.

McLURE, JOHN THOMAS—Care, State Highway Dept., Frankfort, Ky.—(Age 34. Born Chester, S. C.) (B. S. of Civ. Eng., Ala. Pol. Inst., 1909.)—May to Sept. 1906 Rodman, 332 Richmond & Chesapeake Bay Ry.: April to July 1909 Stakeman, Georgia & Florida R. R.: July to Aug. 1909 Rodman with Hazelhurst & Anderson, Cons. Engrs.: Aug. to (9) Sept. 1909 Rodman, U. S. Engr. Office: Sept. 1909 to Feb. 1910 Leveler, Tampa Northern R. R.: Feb. 1910 (2 weeks) Instrumentman, Jacksonville Terminal Co.: Feb. 1910 to April 1911 Min. Engr., Strawn (Tex.) Coal Min. Co., had charge of outside work, such as layout and construction of streets, roads, spurs, sidings, etc., also underground surveying and mapping: April to June 1911 Asst. Res. Engr. on construction, Atlanta & Carolina R. R., in Georgia: June 1911 to Jan. 1912 Transitman with Stone & Webster Eng. Corporation; Jan. to Aug. 1912 with Palm Beach Farms Co., Florida, as Chf. of Party on land survey and subdivision, having charge of two transit parties in camp: Aug. 1912 to March 1913 Chf. of Party on land survey, subdivision and drainage, Ruggles & Weller Eng. Co., Florida: March to Dec. 1913 with Stone & Webster Eng. Corporation, in Ontario, Canada, as Chf. of Party on transmission line location: Dec. 1913 to Aug. 1914 with Palm Beach Farms Co., Florida, as Inspector on canal construction, estimating quantities, inspection and supervision of canal, etc.: Aug. to Sept. 1914 Transitman, Louisville & Nashville R. R.: Sept. 1914 to April 1915 Transitman, Georgia R. R.: May 1915 to April 1916 Appraiser, E. I. Dupont de Nemours Powder Co., in Virginia, taking notes in field for estimating quantities of material in concrete, brick and frame construction work, then working up estimated cost of same, and getting estimates on cost of proposed work; also had charge of design and construction of village to house 2 300, including sewerage and sewage disposal, water, etc.: April 1916 to Jan. 1917 Leveler and Instrumentman, Atlanta & West Point R. R., Atlanta, Ga.: Jan. to

FOR ADMISSION

Feb. 1917 Transitman, L. & N. R. R.: Feb. to May 1917 Min. Engr., King-Harlan Min. Co., Kildav, Ky., in charge of inside and outside engineering, and work incidental to opening up new mine: May 1917 to Dec. 1919 1st Lieut. (1½ years) and Capt. (nearly 1½ years) with 1st U. S. Engrs., 1st Div., as Platoon Commander, Battalion Adj. and Co. Commander, with a pioneer and sapper regiment in time of war: Jan. to April 1920 Inspector, Jefferson County, Ala., in charge of inspection of construction of bitulithic surface on concrete base highway: April 1920 to April 1921 Asst. Engr., Constr. Div., U. S. Army, in charge of field party mapping boundaries of Camps Benning and Knox, also getting up estimates of cost of construction work at Q. M. Depot, Jeffersonville, Ind.: May to Nov. 1921 Res. Engr., Kentucky State Highway Dept., in charge of construction of 4½ miles of reinforced concrete road, revised all old alignment and grades: Nov. 1921 to June 1922 and Jan. 1923 to date Field Engr., same Department, in charge of field party making location surveys and getting up complete plans and estimates for same for hard surface and grade and drain types of highways: June to Dec. 1922 Res. Engr. for Mees & Mees, Charlotte, N. C., in charge of street paving work at Rockingham, N. C. (\$200 000, sheet asphalt on concrete base). (Active practice 13.7 years: Res. Ch. 12.7: Design 4). Refers to E. J. Barry, W. H. Booker, J. T. Madison, J. W. Norton, H. D. Williar, Jr.

MAGNUSSON, CARL EDWARD—4521 Nineteenth Ave., N. E., Seattle, Wash.—(Age 50. Born Harris, Minn.) (B. of E. E., 1896, M. S., 1897, and E. E., 1905, Coll. of Eng., 333 Univ. of Minn.; Ph. D., Univ. of Wls., 1900.)—Sept. 1901 to June 1903 Prof. of Physics, Univ. of New Mexico: June 1903 to Oct. 1904 Prof. of Elec. Eng., New Mexico School (12) of Mines: Oct. 1904 to June 1906 Associate Prof. of Elec. Eng., and June 1906 to date Prof. of Elec. Eng. and Head of Dept. of Elec. Eng., Univ. of Washington; also made a number of reports and tests on engineering projects: July 1911 to June 1912 with Gen. Elec. Co., Schenectady, N. Y., in Testing and Cons. Eng. Depts., research work on dielectric strength of air, corona, suspension insulators and transmission lines: June 1917 to June 1918 Cons. Engr., American Nitrogen Products Co., Seattle: July and Aug. 1917 on transformer design, Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.: also, Sept. 1917 to May 1921 Acting Dean, and May 1921 to date Dean, Coll. of Eng., and Dec. 1917 to May 1921 Acting Director, and May 1921 to date Director, Eng. Experiment Station, Univ. of Washington. (Active practice 21 years: Res. Ch. 21). Refers to W. F. Allison, A. F. Chittenden, A. H. Fuller, J. Jacobs, C. C. More, A. O. Powell.

MARSH, CLAUDE PERCY—323 Lakeside Ave. N. W., Cleveland, Ohio—(Age 48. Born Athens, Pa.)—1892 to March 1902 Tracer, Draftsman and Checker, Union Bridge Co., 334 Athens, Pa., and Athens Plant, American Bridge Co.: March 1902 to Jan. 1922 with New York Central R. R., as follows: 1½ years as Draftsman; 1¾ years Chf. Draftsman: (9) Aug. 1905 to March 1906 and March 1908 to Jan. 1920 Bridge Engr., Elec. Zone; March to Nov. 1906 Asst. Bridge Engr.; Nov. 1906 to March 1908 Asst. to Engr. of Structures, Jan. to Sept. 1920 Acting Engr. of Structures, and Sept. 1920 to Jan. 1922 Engr. of Structures, Elec. Zone: Jan. 1922 to date Engr. of Structures, Cleveland Union Terminals Co. (Active practice 30.8 years: Res. Ch. 19.3: Design 1.5). Refers to A. W. Carpenter, O. E. Hovey, L. D. Rights, C. L. Spaulding, H. T. Welty.

MOORE, GEORGE ROLAND—Manasquan, N. J.—(Age 35. Born Manasquan, N. J.) (C. E., Rens. Pol. Inst., 1909.)—June to Sept. 1909 Surveyor, Lakehurst, N. J., Manhattan & 335 New Jersey Realty Co., surveyed, laid out and staked lots and streets on 70-acre tract: Sept. 1909 to Sept. 1910 Instructor in Civ. Eng., Univ. of Pennsylvania: Sept. 1910 to (4) Feb. 1912 Rodman, Pennsylvania R. R. Co., also acted as Instrumentman, Draftsman, Estimator and Inspector on heavy construction, Bristol Change of Line, including steel and concrete bridge construction, station construction, etc.: Feb. to Sept. 1912 Asst. Engr. with Borough and Township Engr., Princeton, N. J., on municipal engineering, including streets, sewers, sewage disposal and water supply, in charge of field and office work: Sept. 1912 to June 1916 Instructor in Civ. Eng. and later Asst. Prof., Univ. of Cincinnati; at times Faculty Co-ordinator on the following construction projects: sewerage, bridge and street projects of City of Cincinnati; reinforced concrete building construction contracts of Ferro Concrete Constr. Co. in Cincinnati; construction and maintenance projects of Pennsylvania Lines and Baltimore & Ohio R. R. in Ohio: June to Aug. 1916 Asst. Engr. with C. S. Sincerbeaux, Civ. Engr., designed sewage-disposal plant for St. Joseph's Coll.: Aug. to Nov. 1916 Bridge Designer, Mercer County, N. J., designed

FOR ADMISSION

several highway bridges: Nov. 1916 to date in private practice of Civ. Eng. associated with C. S. Sincerbeaux, 9 months on design and construction, for municipalities and others, in Central New Jersey, of sewerage, drainage, water-supply, concrete pavements, structures; part of time acted in advisory and consulting capacity; since Aug. 1917 Chf. of Party, Res. Engr., Asst. Div. Engr., Right of Way Engr. and Asst. Constr. Engr., New Jersey State Highway Dept., in responsible charge of surveys, plans, standard designs and construction of durable highways of State highway system, supervising and administering engineering, surveying, drafting, designing and inspectional forces of the Department under the Constr. Engr. (contracts, aggregated about \$8 000 000 in 1922). (Active practice 13.7 years: Res. Ch. 8: Design 1.1). Refers to G. M. Braudne, C. J. McGiffert, R. A. Meeker, A. G. Nicolaysen, H. Schneider, J. L. Vogel, T. J. Wasser.

MORRISON, CHARLES WALDO—1040 Park Pl., Brooklyn, N. Y.—(Age 38. Born Brookline, Mass.)—1904–1908 student, Massachusetts Inst. of Technology: June to Dec. 1908 336 field and office work, in surveying, computing and drafting, Massachusetts Charles River Basin Comm., on dam, locks and marginal conduit: Dec. 1908 to Dec. 1912 Asst. Engr., (1) Associated Factory Mutual Fire Insurance Cos., on design of steel tanks and towers, examination of structures in field and shop: Dec. 1912 to Dec. 1913 on installation of oil-handling equipment, S. F. Bowser & Co., Indiana, examination of plants using oil in large quantities, recommendations for saving oil: Dec. 1913 to Dec. 1916 in private practice in Boston, Mass., erected buildings, valued plants and sold property: Dec. 1916 to May 1921 Valuation Engr., Interstate Commerce Comm., Bureau of Valuation, valued port, harbor, and terminal properties in Portland, Boston, Providence, New London, New Haven, New York, Brooklyn, Norfolk, etc., railroad properties in many cities and other places: May 1921 to Dec. 1922 in private practice in Brooklyn and New York City, testimony in appraisals and valuation on New York real estate and plants and equipment: Dec. 1922 to date Valuation Engr., Joseph P. Day, Inc., New York City. (Active practice 14.7 years: Res. Ch. 12.8: Design 0.2). Refers to G. Atkinson, A. E. Burton, S. E. Coombs, J. P. McLean, E. C. Sherman, C. M. Upham.

NEWTON, FREDERICK WHITMAN—233 Broadway, New York City—(Age 37. Born Corn- ing, N. Y.) (B. E., Union Univ., 1907.)—June to Dec. 1907 Foreman, Pittsburgh Eastern 337 Co., on construction of Barge Canal lock and dam at Cranesville, N. Y.: Jan. to May 1908 Transitman for Clifford Lewis, Jr., on surveys for Hudson River Water (1) Power Co.: June 1908 to April 1909 Engr., Acme Eng. & Constr. Co., on Barge Canal contract: May to Dec. 1909 Supt. and Engr., Empire Equipment Co., on design, recon- struction and operation of sand and gravel producing plants: Jan. 1910 to Dec. 1916 Constr. Engr. and Supt., Acme Eng. & Constr. Co., on Barge Canal locks and dams at Crescent, Vishers Ferry, Yosts, Canajoharie, Ft. Plain, Mindenville, Jacksonburg, also dredging and miscellaneous structures between Little Falls and Utica: Jan. 1917 to Jan. 1919 Constr. Engr., Eastover Constr. Co., in charge of construction and dredging on New York State Barge Canal from Sterling Creek to Onelda County Line: Feb. 1919 to Jan. 1922 with Mohawk Dredge & Dock Co., until Jan. 1920 as Office Engr. on estimating, plant design, layouts, etc.; then Engr. and Mgr. on construction of Astoria Terminal, New York City: Feb. 1922 to date Engr. Associate in law office of John C. Wait. (Active practice 15.5 years: Res. Ch. 8.7: Design 2). Refers to E. B. Baker, H. W. DeGraff, G. I. Oakley, H. A. Van Alstyne, J. C. Wait.

NICHOLSON, ROBERT HARVEY—1560 Green St., San Francisco, Cal.—(Age 33. Born Anderson, Cal.)—1910 to 1911 (1 year) Chf. Draftsman, C. A. Fellows Co., on construc- 338 tion of Santa Fe Ry. Co.'s depot, Harvey House and Recreation Hall at Barstow, Cal. (\$300 000, reinforced concrete), design of concrete forms: 1911 to 1912 (1 year) (13) Inspector, Santa Fe Ry., on steel and concrete bridge construction, Bridge B-1009, near Fresno, Cal., 900-ft. steel mill creek conduit at Visalia, Cal., reinforced concrete: 1912 to 1916 (4 years) Draftsman, City Engr.'s office, Oakland, Cal.: 1916 to 1917 (1 year) Engr., Oakland (Cal.) Paving Co., design and supervision of street and sewer construc- tion and plain concrete work: 1917 to 1920 Capt., Corps of Engrs., U. S. Army, in charge of all road construction at Camp Kearney, Cal.; in command of engineering com- pany in United States and with A. E. F.: 1921 not on engineering work: 1922 to date (1½ years) Asst. Engr., California State R. R. Comm., valuation work on public utilities (water companies only). (Active practice 11.5 years: Res. Ch. 6.5: Design 1). Refers to F. M. Faude, J. W. Ferguson, J. G. Hunter, H. B. Lynch, W. Stava.

FOR ADMISSION

- OLSON, WILLIAM CHRISTIAN—P. O. Box 525, Kinston, N. C.—(Age 35. Born Canton, Miss.)—1903 to 1904 (1 year) Asst. Draftsman and Ch. Operating Engr., Hattiesburg 339 (Miss.) Light & Power Co.: 1904 to 1905 (1 year) Eng. Apprentice, Westinghouse Elec. & Mfg. Co., East Pittsburgh (Pa.) Works: 1906 to 1909 (including 2 summers) student, (10) Cornell Univ., special course in Mech. Eng., electives in Civ. and Elec. Eng.: June to Oct. 1909 Chf. of survey for proposed hydro-electric development, Gilboa, N. Y.: Oct. 1909 to Sept. 1913 Res. Engr. in full charge of construction for X. A. Kramer, Cons. Engr., Magnolia, Miss., water-works and electric lighting systems, towns of Mt. Olive, Ackerman, Osyka and Chatawa, Miss., water-works and sewerage system, town of Morgan City, La., water-works, electric lighting system and high school building, town of Newton, Miss., and street improvements, electric lighting system and sewerage system, Magnolia, Miss.: Sept. 1913 to Sept. 1914 City Engr., Morgan City, in charge of operation of public utilities and design and construction of street improvements: Sept. 1914 to June 1919 associated with Gilbert C. White, Cons. Engr., Durham, N. C., as Res. Engr. on construction of the following: water-works and sewerage systems and steam turbine power plant, Washington, N. C. (includes filtration plant); water-works, sewerage and gas distribution systems, street paving (sheet asphalt) and steam power plant, Kinston, N. C.; street paving, Greenville, N. C. (preliminaries); surveys for and construction of New Durham (N. C.) River and City High Duty Water-Works stations and systems; street paving (sheet asphalt), Durham; and as Chf. Engr. in office on improvements to water-works, purification plant and impounding reservoir, valley pipe conduits, etc., Raleigh, N. C.; water-works, electric lighting and sewerage systems, Benson, N. C., including appraisal privately owned lighting system; water-works and sewerage system, Wendell, N. C.; water-works improvements, Florence, S. C.; dam and impounding reservoir, Greensboro, N. C.; modern power station, Sumter, S. C.; appraisal, Portsmouth, Berkeley and Suffolk, Va., water-works systems (Asst. to Mr. White), and other miscellaneous work: June 1919 to Sept. 1920 City Engr., Sumter, construction of power station and ice plant: Sept. 1919 to date Cons. Engr. engaged as follows: Dublin, Ga., on water softening plant, municipal water-works, and design of steam turbine power plant (estimated cost \$250 000); Kinston, N. C., designed and constructed steam turbine power plant (cost \$310 000), additional water-works improvements (cost \$50 000) and asphalt street paving (cost \$60 000); Raleigh, N. C., various improvements to water-works system (under construction, estimated cost \$388 000) consisting of rearrangement of distribution system, elevated steel tank, large earth dam and impounding reservoir, wood stave conduits and pipe-lines in valley, control gate-house, new filters, sedimentation basin, enlarged pumping capacity, etc.; Enfield, N. C., water-works, sewerage, electric power plant and street paving (cost \$340 000) (under construction); Rocky Mount, N. C., new filter plant and enlarging and remodeling power plant (plans not completed, estimated cost \$250 000); Fayetteville, N. C., water-works and sewerage system improvements (estimated cost \$350 000), proposed power plant (estimated cost \$215 000) (plans completed); Elizabeth City, N. C., at present planning for \$800 000 improvements to water-works, sewerage and electric power plant and systems; town of Belhaven, N. C., Diesel engine power plant improvements; also other works. (Active practice 15.3 years: Res. Ch. 13.3: Design 8.6). Refers to E. H. Burroughs, M. J. Guyton, B. M. Hall, T. S. Johnson, C. L. Mann, R. E. Snowden, H. A. Underwood.
- PARKER, EARLE DAWSON—26 Crary Ave., Binghamton, N. Y.—(Age 34. Born Paris, N. Y.) (C. E., Rens. Pol. Inst., 1911.)—June-Aug. 1910 Chainman, July-Oct. 1911 340 Rodman, Nov. 1911–April 1912 Instrumentman and in charge of party on preliminary surveys for highways, and May–Oct. 1912 Rodman in charge of construction of high- (3) ways, New York State Highway Comm.: Nov. 1912–May 1913 Jun. Engr., Public Service Comm., First Dist., New York, in charge of field party on construction, Sec. 13, Lexington Ave. Subway, New York City: June 1913–March 1922 with New York State Highway Comm., until March 1914 as Leveler in charge of highway construction (4 months) and of squad on design, plans and estimates of highways (6 months); after April 1914 Asst. Engr., in charge of highway construction (April–Dec. 1914, contract \$55 000) (May–Dec. 1915, Sept. 1916–Jan. 1917 and May–Nov. 1917, contract \$130 000) (April–Dec. 1920 and April–Sept. 1921, two contracts, value \$445 000); in charge of squads on design, preparation of plans and estimates of highways (Jan.–April 1915, Jan.–May 1916, Feb.–April 1917, Dec. 1917–March 1920, Jan.–March 1921 and Jan.–March 1922); in charge of resurfacing macadam highways (contract \$20 000) (June–Aug. 1916) and of field party on layout of highway contract (value \$330 000) (Oct.–

FOR ADMISSION

Dec. 1921): April 1922 to date Asst. Div. Engr., Lane Constr. Corporation, Meriden, Conn., Asst. to Div. Engr. who had general supervision over operations of constructing eight State highway and municipal street improvement contracts. (Active practice 11.9 years: Res. Ch. 5.3: Design 4.3). Refers to C. T. Fisher, H. C. Hill, R. B. Hoadley, Jr., A. T. Paine, H. E. Smith, W. E. Weller.

PARROTT, JOHN CROMWELL—1211 Second St., Roanoke, Va.—(Age 23. Born Lonoacconing, Md.) (B. S., Va. Mil. Inst., 1920.)—June to Sept. 1920 Road Inspector and Draftsman, Virginia State Highway Comm., Roanoke, Va.: 1920 to 1921 student, Univ. of Virginia: July to Dec. 1921 with M. F. Normoyle & Sons, Contrs., Bluefield, W. Va., on (5) construction of reinforced concrete building for Keystone Bottling Works, until Sept. 1921 acted as Engr., then Supt. and in responsible charge: Dec. 1921 to March 1922 with E. G. Frye, Archt., Roanoke, as Draftsman, part of time on structural steel design: March 1922 to date Engr., Clermont Land Corporation, in charge of subdividing, building streets, sidewalks, grading, etc., for 80-acre tract developed for residential property. (Active practice 2 years: Res. Ch. 1.2). Refers to P. A. Blackwell, R. C. Churchill, J. E. Crawford, J. F. MacTier, E. H. McConnell.

PEYTON, WYTHE MUNFORD—Asheville, N. C.—(Age 36. Born Martinsville, Va.)—June to Sept. 1903 Stakeman and Rodman, Imboden & Odell Ry., Charleston, W. Va.: June 1904 to July 1904 Rodman, Atlanta, Knoxville & Northern Ry., Marietta, Ga.: July 1904 to May 1905 Rodman and Instrumentman, Bay Minnette & Ft. Morgan Ry., Bay Minnette, Ala.: May to June 1905 Rodman, Atlantic & Birmingham Ry., Warm Springs, Ga.: June to Sept. 1905 Instrumentman, Kanawha & West Virginia Ry., Charleston, W. Va.: April to Sept. 1906 Asst. Res. Engr., Virginian Ry., Prices Fork, Va.: Sept. 1906 to Nov. 1907 Asst. Res. Engr., Virginia & Southwestern Ry., Bristol and Keokee, Va.: Nov. 1907 to Oct. 1908 Associate Engr. in general practice with City Engr. of Bristol: Oct. 1908 to May 1909 Asst. Res. Engr., Carolina, Clinchfield & Ohio Ry., Johnson City and Erwin, Tenn.: May 1909 to Sept. 1910 City Engr. of Erwin, also in private practice: Sept. 1910 to April 1911 Chf. Engr., North Carolina Interurban Ry. Co., Rutherfordton, N. C.: April to June 1911 Asst. Engr., South Atlantic Transcontinental Ry. Co., Asheville, N. C.: June to Sept. 1911 Engr., general engineering and surveying, Rutherfordton: Sept. 1911 to March 1912 Field Engr. on location and construction, Black Mt. Ry. Co., Burnsville, N. C.: March 1912 to Jan. 1914 Chf. Engr., Carolina Spruce Lumber Co., Pensacola, N. C., and general engineering practice, Burnsville: Jan. 1914 to Jan. 1915 Chf. Highway Engr., Yancey County, at Burnsville: Jan. to April 1915 Engr., general engineering and surveying, at Burnsville: April to Dec. 1915 Highway Engr., North Carolina State Highway Comm., Mitchell and Avery Counties, N. C., Spruce Pine and Newland, N. C.: Dec. 1915 to July 1916 Engr., general engineering and surveying, Burkeville, Va.: July 1916 to date with North Carolina State Highway Comm., until July 1918 as Highway Engr., at Bat Cave and Raleigh, N. C.; then Div. Highway Engr. at Asheville; and since May 1921 Dist. Highway Engr. at Asheville, in charge of construction and maintenance of State highways in 9th Dist. (Buncombe, Madison, Macon, Swain, Cherokee, Graham, Transylvania, Jackson and Clay Counties, approx. 200 miles of construction, estimated cost over \$3 000 000); supervised maintenance of approx. 450 miles. (Active practice 18.3 years: Res. Ch. 13.4: Design 13.4). Refers to H. K. Bishop, J. C. Carpenter, W. S. Fallis, A. R. Losh, G. T. Macnab, V. M. Peirce, J. R. Pennell, J. H. Pratt, C. M. Upham, C. E. Waddell.

PHILLIPS, VANN RICHARD—5041 Ivanhoe Ave., Detroit, Mich.—(Age 39. Born Syracuse, N. Y.) (C. E., Syracuse Univ., 1906.)—July to Aug. 1906 Rodman, and April 1907 to Feb. 1908 Transitman, New York Central R. R.: Aug. 1906 to March 1907 Draftsman, New York State Highway Dept., at Syracuse, N. Y.: Feb. to Dec. 1908 Leveler, New York State Barge Canal: Jan. to April 1909 Tracer, Intercepting Sewer Board, Syracuse, N. Y.: April to Nov. 1909 Leveler, Water Board, Syracuse, acting as Field Engr. in charge of construction of 20-in. high-pressure line (5 miles long), also standpipe: Dec. 1909–Sept. 1921 with N. Y. C. R. R. as follows: Dec. 1909 to Jan. 1914 Transitman on maintenance, including considerable bridge design and construction at Oswego, N. Y., field and office; Jan. 1914 to July 1917 Asst. Engr. in charge of engineering work on Ontario Div. at Oswego; July 1917 to Sept. 1918 Asst. Supervisor of track at Batavia, N. Y.; Sept. 1918 to Sept. 1921 Asst. Engr. at Toledo, Ohio, on special assignment and in charge of work on Val. Order No. 3 on Michigan Div.: Oct. 1921 to date Engr., Froehlich & Emery Eng. Co., Cons. Elec. and Mech. Engrs., Detroit, Mich., in charge of

FOR ADMISSION

roadway and bridges in connection with appraisal of electric interurban lines in Michigan, and since Oct. 1922 in charge of all engineering work on this appraisal. (Active practice 16.4 years: Res. Ch. 9.7: Design 6). Refers to F. B. Crocker, L. W. Greene, J. S. Hancock, H. J. Hanmer, G. D. Holmes, G. Moulton, M. B. Palmer.

PINCKNEY, CLIFFORD MORGAN—782 West End Ave., New York City—(Age 40. Born New Rochelle, N. Y.)—1901 to 1904 (3 years) Engr., New York Telephone Co., Pole 344 Line Div.; Head of field party for C. A. Crane, City Surveyor: Sept. to Nov. 1904 Rodman, Rapid Transit Comm., grades, estimates, surveys, etc., in connection with field (1) work, construction of Rapid Transit Subway: Nov. 1904 to Sept. 1905 Computer with Pres. of Borough of Queens, calculating triangulation data, city plan data, construction estimates and making plans: Sept. 1905 to May 1914 Computer, Transitman and Asst. Engr. with Pres. of Borough of the Bronx, topographical surveys, base-line surveys for sewer construction, charge of section of construction on largest storm relief sewers in the Bronx; Asst. to Cons. Engr., Engr. of maintenance of highways, bridges, estimates and general administration: May 1914 to Dec. 1916 Prin. Asst. Engr. of Highways, and Dec. 1916 to May 1918 Chf. Engr. of Highways, Pres. of Borough of Manhattan: May 1918 to date Chf. Engr. of Borough of Manhattan, sewers, highways and topography. (Active practice 21.4 years: Res. Ch. 11.6: Design 6.9). Refers to C. E. Billin, N. P. Lewis, R. A. Macgregor, R. Ridgway, E. M. T. Ryder, A. Schaeffer, A. S. Tuttle.

PRAGNELL, WILLIAM WALTER—230 Franklin Ave., Grantwood, N. J.—(Age 35. Born New York City.) (B. S. in Civ. Eng., 1912, and C. E., 1913, N. Y. Univ.)—June to Sept. 345 1910 Asst. Engr. with H. S. Kerbaugh, Inc., of Philadelphia, Pa., on construction of narrow-gauge railroad on Catskill Aqueduct work: Feb. 1912 to April 1913 Jun. Asst., (1) Public Service Comm., New York City, on line and grade for subway construction: April to Aug. 1913 Rodman, with State Engr. on New York State Barge Canal: Aug. 1913 to March 1918 Jun. Engr., Public Service Comm., New York City, in charge of squad of draftsmen designing and drafting sewer construction for subway work in Brooklyn, Bronx and Manhattan: March 1918 to April 1919 Designer and Draftsman, Turner Constr. Co., New York City, on reinforced concrete construction for industrial work, mainly the Army Supply Base at South Brooklyn: April 1919 to Feb. 1920 Designer and Draftsman, James Stewart & Co., New York City, on reinforced concrete construction for industrial work, mainly Studebaker Automobile factories at South Bend, Ind.: Feb. to May 1920 Designer and Draftsman with C. C. Hurlbut, Cons. Engr., New York City, on structural steel office building for Munson Steamship Co.: May to Aug. 1920 Designer and Draftsman, Turner Constr. Co., on reinforced concrete for industrial work, mainly Western Elec. Co.: Sept. 1920 to Aug. 1921 Designer and Draftsman, Concrete Steel Co., New York City, designing, drafting and estimating on various kinds of reinforced concrete construction: Jan. to Aug. 1922 Designer and Draftsman, Dwight P. Robinson, Inc., New York City, on reinforced concrete and structural steel for various kinds of building construction: Aug. 1922 to date Chf. Engr. with Jno. D. Walsh, Inc., Dock Bldrs. and Contr. Engrs., Long Island City, N. Y., in charge of designing, drafting, estimating, etc., also of construction of pier on Hudson River at Sparkill, N. Y., for Standard Oil Co. of New York. (Active practice 13 years: Res. Ch. 4.9: Design 9.3). Refers to A. B. Helser, C. H. Snow, A. W. Stephens, T. E. Veltfort, S. Wilmot.

RAY, JAMES PERCY—360 Short St., Lawrenceburg, Ind.—(Age 34. Born Baltimore, Md.)—2 years student, C. E. course, Lehigh Univ.: April to Dec. 1910 Chainman, Baltimore & Ohio R. R.: Dec. 1910 to April 1911 Timekeeper with Torrington & Vanneman, Newburg, W. Va., on construction of masonry dam: May 1911 to April 1915 Leveler, (9) B. & O. R. R.; Inspector on masonry work, miscellaneous survey and drafting: April to Nov. 1915 Valuation Draftsman, Cleveland, Cincinnati, Chicago & St. Louis Ry.: Nov. 1915 to date with B. & O. R. R., Cincinnati, Ohio, until Sept. 1916 as Draftsman, Eng. Dept., Office, Engr. of Constr., on maps, plans and estimates, design of masonry and track layouts; then (over 4¼ years) Field Engr., Eng. Dept., at Dayton, Ohio, in charge of construction, responsible for line, grades, quantity, estimates and bills, 500-car yards, Miami River Bridge, and 2 miles of new line, North Dayton, Ohio, 10-mile change of line on account Miami Conservancy Dist., Taylorsville Dam, and Louie St. Bridge, Dayton; since July 1921 Asst. Engr., Office, Dist. Engr., in field charge, reconstruction of Miami River Bridge, change of line and grade and double track (\$2 000 000) and reconstruction of various main line bridges, Ohio, Indiana and Illinois. (Active practice 12.7 years: Res. Ch. 6.5: Design 0.8). Refers to R. N. Beglen, J. L. De Vou, G. B. Farlow, F. W. Henriel, H. A. Lane, P. G. Lang, R. H. Lee.

FOR ADMISSION

REID, JOHN WHEELER—653 Palmer Ave., West Detroit, Mich.—(Age 50. Born Grand Rapids, Mich.)—1900 to 1917 (17 years) Draftsman and Asst. Engr. on paving, street openings and grade separation, 1917 to 1922 (nearly 5¼ years) Engr., Div. of Grade Separation and Bridges, and 1922 to date (10 months) City Engr., City of Detroit. (7) (Active practice 23 years: Res. Ch. 6). Refers to L. E. Ayres, G. H. Fenkell, L. M. Gram, C. W. Hubbell, I. O. Thorley, E. M. Walker, R. B. Wiley.

SAMS, HAL J—2250 Eunice St., Berkeley, Cal.—(Age 33. Born Central City, Colo.) (B. S. in Civ. Eng., Univ. of Cal., 1913.)—May 1913 to Jan. 1914 Structural Draftsman in office of M. C. Couchot, Structural Engr., San Francisco, design in steel, reinforced concrete and wood on Fine Arts Bldg. for 1915 Exposition, Oakland Municipal Auditorium, and (13) various office and private buildings: Jan. to March 1914 Structural Draftsman on revaluation work, Spring Valley Water Co., San Francisco, under direction of Supt. at Millbrae, Cal.: April to Aug. 1914 Eng. Draftsman in office of City Engr., Oakland, Cal., on estimates and maps of subdivisions and sewer system: Aug. 1914 to Nov. 1918 Civ. Engr., Grade II, California Highway Comm., Div. IV, San Francisco, 10 months as Office Engr. preparing estimates of cost, design of highway structures and preliminary reports, 1¼ years Asst. Res. Engr. on, and 1¼ years Res. Engr. in charge of, construction of highway layouts: Nov. 1918 to June 1919 Engr., Worswick Constr. Co., Gen. Contrs., Vallejo, Cal., especially on street and road contracts: June 1919 to April 1921 Associate County Engr., Napa County, Cal., in charge of plans and construction of highway between Napa and Colistoga (25 miles); directed design of all structures for the county: April 1921 to date Field Engr., Portland Cement Association, covering various territories in Northern California, present territory comprising Solano County and Sacramento Valley extending from Sacramento County (which is included) northerly to Oregon State Line (under Dist. Engr.) (Association is constantly called upon to give engineering advice and judgment and to meet unforeseen conditions in many lines of construction). (Active practice 9.7 years: Res. Ch. 6: Design 1). Refers to C. C. Cottrell, M. C. Couchot, A. P. Denton, C. Derleth, Jr., J. B. Leonard, G. Mattis, C. N. Reitze, C. H. Sweetser, R. K. West.

SCHNEIDER, EMIL HERBERT—1047 Elghty-third St., Brooklyn, N. Y.—(Age 27. Born Minneapolis, Minn.) (Ph. B., Sheffield Sci. School, 1916; C. E., Graduate School of Yale Univ., 1920.)—June to Oct. 1917 Engr. for Sperry & Buel, Inc.; Transisman, then Chf. of Party on cross-country power transmission line survey; also assisted in checking (1) design of concrete bridge (Church St., Bristol, Conn.); also general engineering work: Oct. 1917 to Jan. 1918 Jun. Asst., Tunnel Div., Public Service Comm., New York, inspection, lines and grades: Jan. to Feb. 1918 Res. Engr., Bartlett Hayward Co., in charge of erection of toluol plant for Brooklyn Union Gas Co., Fulton Branch: Feb. 1918 to June 1919 Private, Corporal, Sergeant and Master Engr., Co. F and Headquarters Co., 302d Engrs., 1½ years overseas, at times in charge of planetable work, road and bridge reconaissance, demolition; after Nov. 1918 in charge of road construction and repair: July to Oct. 1919 Instructor, Yale Forest School: Oct. 1919 to June 1920 graduate student in Civ. Eng., Yale Graduate School: April 1921 to Dec. 1922 Engr., and Jan. 1923 to date Chf. Engr., Cunningham & Foley, Inc., building construction, New York City, in charge of all engineering work, mostly construction, also some design, power plant and office building construction, heavy shoring of buildings and alterations. (Active practice 4 years: Res. Ch. 2.9). Refers to S. E. Barney, R. H. Sartor, C. J. Tilden, J. C. Tracy, B. Wilson.

SEAMAN, VAN BRUNT—12 Fiske Pl., Brooklyn, N. Y.—(Age 26. Born Brooklyn, N. Y.) (C. E., Cornell Univ., 1920.)—Sept. 1918 to April 1919 Engr., American International 350 S. B. Corporation, Philadelphia, checking test runs, inspection and warehouse layout, etc.: June 1920 to date Statistician, U. S. Rubber Co., New Haven and New York, (1) chartography, analysis of production methods, planning, sales; Asst. to Merchandise Mgr., installation of stock control systems. (Active practice 3.4 years:). Refers to F. A. Barnes, J. E. Perry, C. D. Pollock, G. A. Taber, L. C. Urquhart.

SELLNOW, FRANK CADY—Haskell, N. J.—(Age 34. Born Albany, N. Y.) (B. E. in San Eng., Union Coll., 1912.)—June to Sept. 1910 Axeman, and June to Sept. 1911 Chain- 351 man, New York State Highway Comm.: Aug. 1912 to June 1913 Rodman, New York State Barge Canal, Oswego Branch, Chf. of Party on topographical surveys of lands to (1) be flooded, Searcher of deeds: June 1913 to July 1917 (except July 1916 to April 1917

FOR ADMISSION

on Mexican border with New York Cavalry) with Bureau of Eng., Albany, N. Y., until Dec. 1913 as Inspector of streets and sewers (except Dec. 1913 to April 1914 Leveler on office work in connection with street improvements, Chf. of topographical survey party), in charge of repaving some streets in business section (11 months) including laying some sewers, and of construction of two sections 66-in. intercepting sewer (1 year) and reinforced concrete grit chamber and pumping station, sewage-disposal plant (1½ years): July 1917 to Jan. 1918 with First New York Cavalry and 104th Machine Gun Battalion: Jan. 1918 to May 1919 2d Lieut., 26th Engrs. (the water supply regiment of the A. E. F., actively engaged during operations of First Army), U. S. Army, 6 months in France: July 1919 to date with North Jersey Dist., Water Supply Comm., until Nov. 1920 as Chf. of Party on surveys and office work in connection with Wanaque Water Supply Project, 3 months on preparation of specifications for Wanaque Dam; since Nov. 1920 Asst. Engr. in charge (reporting to Asst. Chf. Engr.) of construction of foundations for Wanaque Dam (\$1 500 000 contract), and made field designs of minor structures on this work. (Active practice 9.1 years: Res. Ch. 7.2: Design 1.2). Refers to C. J. Craigmile, N. C. Holdredge, F. R. Lanagan, A. H. Pratt, A. L. Sherman, M. R. Sherrerd, H. B. Wheatcroft, Jr.

SMART, CLINTON HAYNER—2209 Sixteenth St., Troy, N. Y.—(Age 31. Born Troy, N. Y.)

—3 years student in Civ. Eng., Rensselaer Polytechnic Inst.: June 1912 to April 1913

352 Chainman, New York Central & Hudson River R. R.: April to Sept. 1913 Chainman, New York State Barge Canal Dept., Ft. Edward, N. Y.; Asst. to Engr. in charge of

(3) construction of power houses, etc.: June 1914 to Dec. 1917 with New York State Highway Dept., until April 1917 as Rodman at Syracuse and Albany; had responsible charge of contract to reconstruct Auburn-Sennett Highway, removing old macadam and laying 2-in. bituminous top, penetration method, in Albany Div., and did instrument work for several road surveys; then Jun. Asst. and Asst. Engr., Grade 1, responsible charge of reconstruction of two highways at Defreestville and Raymertown: Dec. 1917 to Jan. 1920 at U. S. Watervliet Arsenal, Watervliet, N. Y., a short time as Student Inspector, then Inspector's Asst. on inspection of ordnance and reporting conditions to Inspection Officer; and after Feb. 1919 Foreman Shop Inspector, Heavy Field Cannon Dept., supervised reorganization of Inspection Div.: Jan. 1920 to date Sales Engr., W. & L. E. Gurley, Troy, N. Y., promoting sales of surveying instruments and aiding in adapting them to needs of engineering work. (Active practice 6.9 years: Res. Ch. 2.2). Refers to F. T. Darrow, C. I. Day, P. C. Ricketts, R. Ridgway, H. O. Schermerhorn, G. R. Solomon.

SMITH, JOHN THOMS—Plaza Libertad 1143, Montevideo, Uruguay—(Age 45. Born Montevideo, Uruguay.) (Engr., Univ. of Uruguay, 1901.)—Received certificate from

353 Ecole Nationale des Ponts et Chaussees, Paris, France: Aug. 1902 to April 1903 Departmental Engr., public works, Dept. of San José, Uruguay: April 1903 to Oct. 1904 Chf.

(1) of Technical Region No. 9, Uruguay: Oct. to Dec. 1904 First Class Engr., National Dept. of Engrs., Uruguay: Dec. 1904 to Jan. 1907 commissioned by Uruguayan Govt. to study in Europe: Jan. 1907 to Dec. 1908 Director of Official Comm. to Report on Navigation and Power of Salto Grande Falls: Dec. 1908 to Dec. 1911 Director and Constructor of state swinging bridge at Carmelo, Uruguay: March 1911 to Jan. 1915 Member of Board of Directors, and Jan. 1915 to date Vice-Pres., General Management of State Electrical Power Stations. Uruguay: also 1911 to 1914 Official Member, Uruguayan Committee of International Electrotechnical Comm., and June 1913 to date Chf. of pavement company, La Asfaltadora Uruguay. (Active practice 18 years: Res. Ch. 18). Refers to J. W. Doty, A. Durant, J. Shand. (Applies in accordance with Sec. 1, Art. 1, of the By-laws.)

SMITH, LESTER CHAUNCEY—816 Howard Ave., New Orleans, La.—(Age 34. Born Montgomery, Ala.) (B. S. in C. E., Ala. Pol. Inst., 1909.)—Aug. to Dec. 1909 Surveyor,

354 U. S. Engr. Dept., Montgomery, Ala., on topographic surveys of Coosa and Etowah Rivers for water-power development and storage reservoirs; about 2 months Transitman

(15) and about 3 months Chf. of Party: Feb. 1910 Asst. to County Engr., Montgomery County, Ala.: April 1910 to April 1911 Surveyor, U. S. Engr. Dept., Mobile (Ala.) Dist., on survey of Pascagoula River as Instrumentman and Draftsman: May 1911 to April 1912 Field Draftsman (6 months) and Instrumentman (nearly 4 months), M. S. & K. C. R. R.: 1912 to 1913 (1 year) Surveyor, Chf. of Survey Party and Draftsman, Alabama Power Co., on surveys for hydro-electric development and drawing maps of same; 6 months in responsible charge of surveys: 1913 to 1917 Jun. Engr., U. S. Engr. Dept.,

FOR ADMISSION

Montgomery, in charge of river surveys on Chattahoochee and Flint Rivers and assisting in design of dams, locks, etc. (1 year), and in charge of construction of Dam No. 5, Coosa River, Ala. (2½ years): June to Sept. 1917 Student Engr., Officers' Training Camp: Aug. 1917 to July 1919 1st Lieut. and Capt., 2d Regt., U. S. Engrs. (Regulars): Sept. to Oct. 1919 Jun. Engr., U. S. Engrs., Montgomery Dist., in charge of channel and jetty work on Alabama and Coosa Rivers: Oct.-Dec. 1919 Res. Engr. on construction of bridges, with Garrett & Slack, Engrs., Montgomery: Jan. 1920 to date Mgr., Wharf and Dock Dept., Doullut & Williams Co., Inc., Engrs. and Gen. Contrs., New Orleans, La., in charge of design and construction of wharves, docks, etc. (Active practice 12.8 years: Res. Ch. 7.4). Refers to C. G. Cappel, J. P. Ewin, J. M. Garrett, H. J. Lane, O. K. Olsen, W. H. Williams, J. K. Woolf.

BUTHERINGTON, ERNEST JOSEPH—400 Central Union Station, Cincinnati, Ohio—(Age 32. Born Wilmington, Del.)—(Baltimore Polytechnic Inst., 1909.)—Oct. 1909 to July 1918 Designer of freight and passenger terminals, concrete bridge structures and grade-crossing eliminations, and July 1918 to Jan. 1920 Chf. Draftsman, Eng. Dept., Baltimore and Ohio R. R., Western Lines, in charge of engineering department draftsmen of Dept. of Chf. Engr., Engr. of Bldgs., Engr. of Bridges and Signal Engr., and of all field surveys: Jan. 1920 to date Office Engr., B. & O. R. R., supervising engineering office work (design and estimates) in Constr. Dept.; in charge of field surveys, field investigation on construction projects and surveys. (Active practice 13.4 years: Res. Ch. 4.6: Design 8.8). Refers to R. N. Begien, G. B. Farlow, E. G. Lane, H. A. Lane, P. G. Lang, Jr.

WITZER, HERMAN JOSEPH—184 Covert St., Brooklyn, N. Y.—(Age 36. Born Brooklyn, N. Y.)—Dec. 1909 to Sept. 1910 Rodman and Instrumentman, Gilmore & Pittsburg R. R.: Dec. 1911 to Oct. 1912 Instrumentman, Butte, Anaconda & Pacific Ry.: Jan. to Aug. 1913 Instrumentman, Utah Power & Light Co., Salt Lake City, Utah, on location high-powered transmission line, and on stream gauging and stadia topographic surveys: Oct. to Dec. 1913 Asst. Engr., Silver Bow Roads Association, Butte, Mont., in charge of location and construction of 3 miles of road: Jan. to April 1914 Asst. Engr., East Butte Min. Co., Butte, on construction of spurs, trestles, ore bins and buildings: May to Aug. 1914 with W. J. Hagenah, Chicago, Ill., as Computer and in charge of field party on valuation, B. A. & P. Ry.: April 1915 to Dec. 1916 with U. S. Reclamation Service, Ft. Shaw, Mont., as Chf. of Party on location of canals and laterals, public land subdivision, construction of canals, planetable surveys and in charge of location and construction of 12 miles of canal road: Sept. 1917 to July 1919 with U. S. Army, Co. H, 311th Inf., 2d Lieut. and 1st Lieut., Engrs., Div. of Military Mapping, on map construction in Virginia and North Carolina; on research work in photogrammetry (under Maj. J. W. Bagley) for construction of contour maps from airplane photographs; 11 months with G. H. Q. in France on same work: Oct. 1919 to Jan. 1920 with H. E. Elrod Co., Dallas, Tex.: Asst. to City Engr., Cisco, Tex.: Jan. 1920 to Oct. 1922 Hauling Contr., furnishing and hauling concrete and paving materials for roads and street paving in Eastland, Ft. Worth and Wichita Falls, Tex.: Sept. 1920 to June 1921 also Engr. and Supt. H. F. Friedstedt Co., Chicago, on construction of hollow-concrete dam (not completed) for City of Cisco: Sept. 1921 to Oct. 1922 also with East Texas Coal & Development Co., Ft. Worth, Tex., collaborating with W. H. Johnson, Chemist, investigating commercial possibilities of lignite briquetting plant with brick and glass plants in East Texas. (Active practice 9.1 years: Res. Ch. 4.7). Refers to T. L. Bell, Jr., J. H. Clark, D. Lee, G. R. Logan, A. M. Vance, E. C. Woodward.

MAGGART, WILLIAM MAURICE—1528 Henry St., Los Angeles, Cal.—(Age 25. Born Greenvalley, Ill.) (B. S. in Civ. Eng., Cal. Inst. of Tech., 1922.)—June to Sept. 1919 Deckhand on dredge, Imperial Irrigation Dist.: June to Sept. 1920 Axeman, acting as Chainman and Rodman, Southern California Edison Co.: June to Sept. 1921 Instrumentman, acting as Rodman and Recorder, and June to Sept. 1922 Topographical Draftsman, Bureau of Power and Light, Los Angeles: Oct. to Dec. 1922 Jun. Draftsman, Road Constr. Dept., Los Angeles County, plotting surveys, laying grades, estimating, etc.: Dec. 1922 to date Eng. Draftsman with John C. Austin, Archt., designing and drafting reinforced concrete and steel structures, such as schools, churches, office buildings, etc. (Active practice 0.6 year). Refers to R. M. Beanfield, E. W. Cunningham, R. R. Martel, W. W. Michael, F. Thomas.

FOR ADMISSION

TAYLOR, WALTER HERRON—City Engr., Norfolk, Va.—(Age 50. Born Norfolk, Va.) (C. E., Va. Mil. Inst., 1892.)—July 1892 to March 1895 with Norfolk & Western Ry., 358 until March 1894 as Rodman and Instrumentman; then Asst. Supervisor M. of W., at Wytheville and Pulaski, Va.: March 1895 to date with City of Norfolk, Va., until (5) Feb. 1915 as Prin. Asst. City Engr., from Sept. 1914 to Feb. 1915 having full authority of City Engr. who was in ill health; then City Engr. and after Sept. 1919 also Director of Public Works; has been in charge of construction, operation and (with others) framed specifications and designed following municipal work: four steel and a greater number of wooden bridges; highway work and maintenance; extended and developed system of sanitary house sewers, including eleven pumping stations and 120 miles of sewers, approx. 40 miles of large concrete pipe or rectangular reinforced concrete culverts, etc.; participated in enlarging the water supply plant, during past 2 years new supply has been developed (cost \$3 500 000); has directed work involving outlay of over \$8 000 000; work also includes street cleaning, garbage disposal and street lighting. (Active practice 30.7 years: Res. Ch. 25: Design 25). Refers to M. A. Butler, J. N. Chester, R. K. Compton, J. E. Crawford, W. D. Faucette, E. A. Frink, B. P. Harrison, A. Hazen, J. W. Ledoux, D. H. Maury, F. P. Smith.

TRAMS, THEODORE HERMAN—1200 Sycamore St., Milwaukee, Wis.—(Age 43. Born Kolberg, Germany.) (B. S. in C. E., Univ. of Ill., 1907.)—June to Sept. 1906 Rodman, 359 Delaware, Lackawanna & Western R. R.: June to Sept. 1907 Inspector, Scranton (Pa.) locomotive shop construction: Sept. 1907 to July 1908 Instructor in surveying, etc., (7) Missouri School of Mines, Rolla, Mo.: Feb. 1909 to Jan. 1911 in charge of concrete bridge and arch construction, D. L. & W. R. R., also macadamizing of highways, all on Delaware, Lake Hopatcong Cut-off in New Jersey; May 1911 to Aug. 1913 with D. L. & W. R. R. in charge of Montclair (N. J.) Station construction (7 months) and of concrete work on Tunkhannock Creek Viaduct, Nicholson, Pa. (1½ years): April 1914 to June 1917 Asst. City Engr., Lewistown, Mont., on sewer design, electric street lighting, water-works design and installation, also paving, etc.: June 1917 to May 1919 in private practice of engineering on surveys, designs and supervision of small town street improvements and sewer design for Grass Range, Mont., etc.: May to Aug. 1919 Res. Engr., Tschergi & Sons, on concrete pavement construction at Brooklyn, Iowa (cost of construction \$250 000); remainder of year in private practice: April to Sept. 1920 on water-works construction, Winnett, Mont. (cost of installation \$40 000): Sept. to Dec. 1920 Asst. City Engr. in charge of concrete bridge construction, Lewistown (about \$25 000); private practice: Sept. 1921 to Aug. 1922 Prof., C. E. Dept., Valparaiso (Ind.) Univ.: Sept. 1922 to date Instructor, C. E., Dept., Marquette Univ., Milwaukee, Wis., municipal courses, testing laboratory, etc. (Active practice 13.1 years: Res. Ch. 9.9: Design 2.2). Refers to I. O. Baker, J. G. Bennett, J. C. Pinney, G. J. Ray, C. C. Williams.

VAN WAGNER, WALTER MARTIN—222 Chestnut St., Roselle, N. J.—(Age 32. Born Harrisburg, Pa.) (B. Sc. in C. E., Rutgers Coll., 1914.)—Sept. 1914 to Feb. 1915 360 Inspector and Draftsman for D. C. & Wm. Jackson on inventory and appraisal of Public Service Elec. Co. property in New Jersey for Public Utility Comm., Newark, N. J.: (1) May 1915 to Nov. 1916 Field Engr., T. A. Gillespie Co., New York City, on construction of factory and survey of land, industrial and standard gauge railroad work, layout of buildings, pipe-lines, sewers, company village and field work for Union Powder Corporation, Parlin, N. J., in charge of field work and drafting and designing based on data obtained in field: Nov. 1916–Feb. 1919 with Hercules Powder Co., 6 months on design of buildings, apparatus and equipment for use in manufacture of smokeless powder and recovery of solvents therefrom; remainder of time Solvent Supt., in responsible charge of operation, maintenance and construction of Solvent Dept., 1 year at Parlin, N. J., also manufacture of pyro smokeless powders; and 10 months at Kenil, N. J., also Consultant in design of new equipment and apparatus: March 1919 to Jan. 1923 Asst. Supt., American Agricultural Chemical Co., Carteret, N. J., in responsible charge of all factory operations; Consultant on maintenance and construction: Jan. 1923 to date Res. Borough Engr., Roselle, N. J., in responsible charge of all engineering projects, maintenance and construction work. (Active practice 8.4 years: Res. Ch. 7.9: Design 1). Refers to C. W. Haasis, R. W. Hunt, L. Powers, S. A. Stephenson, Jr., S. N. Williams, A. W. Yereance.

FOR ADMISSION

VAUGHN, FRANK K—747 Main St., Hamilton, Ohio—(Age 39. Born Otsego, Mich.)—(B. S. of C. E., Univ. of Mich., 1907.)—June to Dec. 1907 Draftsman, Dec. 1907 to 361 Nov. 1908 estimating, designing and inspecting, Nov. 1908 to July 1909 Asst. Field Supt., and July 1909 to March 1910 Field Supt., McClintic-Marshall Co., Pittsburgh, Pa.: March 1910 to March 1916 Gen. Mgr., and full charge of estimating, designing and construction, Cullen & Vaughn Co., Hamilton, Ohio: March 1916 to date Pres., F. K. Vaughn Bldg. Co., Hamilton; Company has designed and built several factory buildings and garages (brick and steel and reinforced concrete), also built (from other designs) foundations for steel and reinforced concrete bridges, 3 000-kw. hydro-electric plant, including head-gates and tail-race, and reinforced concrete building for Ford Motor Co., school and bank buildings and churches. (Active practice 15.6 years: Res. Ch. 14.3: Design 1.3). Refers to R. C. Cogswell, J. C. Lathrop, A. McKinley, H. S. Marshall, C. H. Paul, C. A. Wilson.

WARD, JOSEPH EUGENE—1016 City National Bank Bldg., Wichita Falls, Tex.—(Age 29. Born Wichita Falls, Tex.) (B. S. in C. E., Univ. of Tex., 1917.)—Aug. to Oct. 1913 362 Instrumentman, and July to Oct. 1915 Instrumentman and Paving Inspector, City of Wichita Falls, Tex.: June to Sept. 1916 Rodman, Santa Fe R. R.: June to Sept. 1917 (15) San. Engr., City of Austin, Tex., making investigations of water supply and daily bacteriological analysis of existing supply: Sept. 1917 to May 1918 Instructor, School of Military Aeronautics, U. S. Army, at Austin: May 1918 to Feb. 1919 with Eng. Corps, U. S. Army: Feb. to July 1919 Deputy County Surveyor, Wichita County, Tex., in direct charge of work of County Surveyor during oil boom: July 1919 to June 1920 and Nov. 1921 to April 1922 private practice, engineering and surveying, at Wichita Falls: Sept. 1920 to Nov. 1921 Sewer Engr., Wichita Falls, in complete charge of construction of \$1 000 000 worth of sewers (6 to 80 in.): April 1922 to Feb. 1923 member of firm, Montgomery & Ward, Cons. Civ. Engrs., especially on oil field and municipal engineering; in direct charge of all field work, including that for plans of \$500 000 worth of municipal improvements. (Active practice 5.5 years: Res. Ch. 4.6: Design 1.1). Refers to E. C. H. Bantel, J. Montgomery, T. U. Taylor, R. A. Thompson, R. G. Tyler, M. C. Welborn.

WARDWELL, THEODORE MAXWELL—Box 191, Sheridan, Wyo.—(Age 27. Born Pembina, N. Dak.) (B. S. in C. E., Univ. of N. Dak., 1917.)—Sept. 1916 to June 1917 363 (intermittent work, total 3 months) Field Asst. U. S. Geological Survey; June 1917 to April 1918 Asst. Hydrographer, Valler (Mont.) Land & Water Co., field measurements of (11) about thirty-five gauging stations on 90 000-acre project, with investigations as to seepage, evaporation and coefficients of flow, and compilation of summaries of same with respect to duty, losses and apportionment; from April 1919 to April 1920 Hydrographer on similar work for Company, also underground flow experiments and rating of large structures as measuring devices, and work with farm measuring devices of different types: May 1918 to March 1919 with U. S. Army: March 1920 to date Asst. City and County Engr., Sheridan City and Sheridan County, Wyo., surveys, plans, estimates and construction of various types of paving; design, drafting, construction of steel and concrete bridges; location, surveys, plans, estimates and construction of surfaced and graded highways with accompanying structures; land surveys, water right applications, survey and location of irrigation works. (Active practice 4.5 years: Res. Ch. 3.3). Refers to C. E. Atwood, H. M. Chadwick, E. F. Chandler, F. C. Emerson, E. Gillette, S. B. Lamb, P. F. LaValle.

WENTWORTH, JOHN LANGDON—101 Terminal Station, Norfolk, Va.—(Age 25. Born Roanoke, Va.)—June to Sept. 1915 and June 1916 to Jan. 1917 Chairman, Jan. 1917 to 364 March 1918 Leveler, and March 1918 to date Transitman, Norfolk & Western Ry. (Active practice 6.9 years). Refers to P. A. Blackwell, A. Bruner, J. E. Crawford, (5) F. P. Turner, W. P. Wiltsee.

WEST, LESTER WALKER—12 Berwick St., Worcester, Mass.—(Age 44. Born Sterling, Mass.) (B. S. in C. E., Worcester Pol. Inst., 1900.)—July 1900 to Sept. 1903 Drafts- 365 man, Tracer, Detailer, Checker and Squad Foreman on structural steel, Brown Hoisting Machinery Co., Cleveland, Ohio: Sept. 1903 to date with Eastern Bridge & Structural (2) Co., Worcester, Mass., as follows: Sept. 1903 to May 1905 Checker of shop detail draw-

FOR ADMISSION

ings, structural steel; Estimator of structural steel; May 1905 to Nov. 1908 Chf. Draftsman, structural steel for bridges and buildings; Nov. 1908 to Sept. 1912 Asst. Engr.; Sept. 1912 to date Constr. Engr.; since Jan. 1920 Chf. Engr. of Constr. (Active practice 22.3 years: Res. Ch. 17.7: Design 18.5). Refers to C. M. Allen, A. W. French, S. Lund, E. F. Miner, S. H. Pitcher.

WHEELER, JERROLD ELLSWORTH—1104 May Bldg., Pittsburgh, Pa.—(Age 21. Born Elkins, W. Va.) (B. S. C. E., W. Va. Univ., 1922.)—June to Sept. 1920 Draftsman, Baltimore & Ohio R. R.: June to Sept. 1921 Transitman, Taylor County Road Dept., Grafton, W. Va.: June 1922 to date estimating, general design and drafting for Independent (6) Bridge Co. (Active practice 0.7 year). Refers to A. T. Bragonier, R. P. Davis, W. S. Downs, J. V. Funderburk, H. R. Hortenstine, C. Swecker.

WILLIS, WILLIAM PREY—Box 880, Charleston, S. C.—(Age 30. Born Roslyn, N. Y.)—1911 to 1914 student, C. E. course, Ohio Northern Univ.: Sept. 1914 to May 1915 Draftsman and Surveyor, Davis Coal & Coke Co., in Thomas, W. Va., on mine surveys: May to Oct. 1915 Civ. Engr. with County Engr. of Middletown, N. Y., on property surveys, (10) water-supply systems and railroad surveys: Oct. 1915 to Feb. 1918 Jun. Asst. Engr., Public Service Comm., New York City, on construction work on Broadway Subway and on inspection of materials: Feb. 1918 to date with Standard Oil Co. (New Jersey), until Sept. 1919 as Constr. Engr. and Chf. Draftsman, Bayway Refinery, still construction, railroad trestles, power-house construction, etc.: then with Gen. Eng. Dept., Elizabeth, N. J., on estimates (reviewing) for general refinery construction; Nov. 1919 transferred to Charleston, S. C., as Constr. Engr. on 10 000-bbl. refinery; and Mech. Supt. since operation of refinery. (Active practice 9.4 years: Res. Ch. 4.9: Design 4.9). Refers to B. C. Collier, J. E. Gibson, G. W. Sackett, J. Verner, T. W. Waddington.

WYLY, LAWRENCE THEODORE—715 University Ave., S. E., Minneapolis, Minn.—(Age 29. Born Cardington, Ohio.) (B. A., Oberlin, Ohio, Coll., 1916; B. S. Eng., Univ. of Minn., 1920.)—June to Sept. 1914 Rodman on survey, Arthur Iron Min. Co., Hibbing, Minn., stripping estimates, location new yards, roads, buildings, etc.: June to Oct. 1916 (7) Instrumentman and Inspector on construction, Columbia Chemical Co., Barbarton, Ohio, in charge (under Constr. Supt.) of location and inspection of new buildings, engine foundations, etc.; Oct. 1916 to May 1917 Instrumentman on preliminary survey for Iron Lake Survey at Mesaba, Minn. (W. G. Swart), in charge field party, topography, mapping, ore outcrops, location work, etc., over a township: May to July 1917 in 1st Officers' Training Camp, Forts Snelling and Leavenworth; Member, Engr. Co., 13th Prov. Training Regt.: Aug. to Sept. 1917 Instrumentman for Alvord & Burdick, Contrs., at Camp Grant, Rockford, Ill., in charge field party, location and inspection of waterworks, sewer and road layout and construction: Sept. 1917 to Jan. 1919 1st Lieut., Air Service, U. S. Army, Member, 148th Aero Squadron, A. E. F., attd. B. E. F. France: Aug. to Sept. 1919 Instrumentman on city survey, Duluth, Minn.: June to Sept. 1920 Structural Draftsman, M. & St. L. Ry., at Minneapolis, Minn.; Inspector on 7th St. Bridge reinforcing (Minneapolis), and in charge (under Chf. Engr.) of making estimates and plans for bridge work: Sept. 1920 to date with Northern Pacific Ry., until March 1922 as Inspector in Eng. Dept., on construction, in charge in field (under Dist. Engr.) of replacing seven railroad bridges; since then Draftsman in Bridge Dept., masonry, falsework, estimates, checking, design slab bridges, etc. (Active practice 3.4 years: Res. Ch. 1.3: Design 0.8). Refers to J. W. Alvord, M. F. Clements, E. K. Coe, A. S. Cutler, G. C. Staehle, F. J. Taylor.

ZIGENBEIN, CLARENCE EARL—3002 Peabody Ave., Dallas, Tex.—(Age 35. Born Cameron, Mo.) (B. S. in C. E., Univ. of Mo., 1910.)—1910 to 1912 bridge detailing, King Bridge Co., Cleveland, Ohio (1 year), and American Bridge Co., Lassing Plant, Chicago, Ill. (1 year): 1912 to 1918 System Bridge Inspector, Bridge Engr.'s office, Chicago. (15) Rock Island & Pacific Ry. Co., approx. 2 years designing, 2 years on inspection and field engineering, and 2 years superintending construction: 1918 to 1920 (2 years) private work; contracting and constructing bridges: 1920 to date (2½ years) Chf. Engr., Austin Bros. Bridge Co., Dallas, Tex., supervising designs, details, contracting and construction. (Active practice 12.5 years: Res. Ch. 8.5: Design 2). Refers to K. H. Hanger, J. W. Jones, O. H. Koch, F. A. Muth, V. H. Smith, W. S. Williams.

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FROM THE GRADE OF ASSOCIATE MEMBER

ALLING, ARTHUR RICH, Assoc. M. Am. Soc. C. E.—410 Spruce St., Little Rock, Ark.—(elected May 12, 1919.) (Age 34. Born Canon City, Colo.) (B. S. in C. E., Univ. of Colo., 1914.)—June to July 1909 office work on irrigation project, Denver Reservoir & Irrigation Co., at Erie, Colo.: July and Aug. 1910 Chairman, U. S. Forestry Service: (14) July to Dec. 1911 Transitman and Chf. of Party on surveys in and around San Antonio, Tex., and along Mexican border: July to Nov. 1914 Chairman, Idaho State Highway Dept., part of time also acted as Transitman: Jan. 1915 to Aug. 1916 Paving Inspector, City of San Antonio, Tex., had active charge of construction of all types of paving (total work done by city about 75 miles): Aug. 1916 to May 1918 Office Engr. and Res. Engr., Highway Comm. of Washington County, Greenville, Miss., on 150 miles concrete road (\$1 000 000): May 1918 to May 1919 Div. Engr., Arkansas-Louisiana Highway, in charge of location, construction and office, 153-mile intercounty highway (cost nearly \$4 000 000): May 1919 to Sept. 1921 Asst. Engr. with Ford & MacCrea, Cons. Engrs., Little Rock, Ark., on paving, highway and miscellaneous engineering, including cost estimates and design and supervision of construction: Sept. 1921 to date Prin. Asst. Engr., Road Improvement Dist. No. 10, Pulaski County, Ark., in charge of field work and construction of 40 miles of highways and streets (cost \$2 000 000); also worked up estimates of cost, plans and designs. (Active practice 8.2 years: Res. Ch. 7.2: Design 5.6). Refers to W. E. Ford, N. B. Garver, F. A. Gerig, R. S. Lander, D. A. MacCrea, E. P. Shuman, G. H. Sykes.

AYRES, QUINCY CLAUDE, Assoc. M. Am. Soc. C. E.—Iowa State Coll., Ames, Iowa—(elected Junior Feb. 4, 1914; Assoc. M. Jan. 19, 1920.) (Age 31. Born Columbus Miss.) (B. S. and B. E., 1912, and C. E., 1920, Univ. of Miss.)—June to July 1912 Instructor in mechanical drawing, Univ. of Mississippi: Aug. to Dec. 1912 Rodman, (7) Computer and Draftsman with C. H. West, Cons. Engr., collecting and preparing data for report on defective sewer system of Greenville, Miss.: Jan. 1913 to June 1914 Transitman and Office Engr. on design of ditches, compilation of data and development of improvement plans for Otter Bayou and Washington Bayou Drainage Dist. (Miss.): July to Sept. 1914 Transitman on location of drainage canals in Arkansas: Oct. to Dec. 1914 Draftsman and Computer, Mississippi Levee Board; Greenville, preparing charts showing changes in banks of Mississippi River since 1881: Jan. to July 1915 Asst. Engr. on construction of macadam and gravel roads in Lowndes County, Miss.; design of small bridges and culverts: Aug. to Dec. 1915 Leveler and Topographer, U. S. War Dept., on surveys of Muscle Shoals Project, Tenn., also compiling data and estimating quantities for dams and track layout: Jan. 1916 to Aug. 1919 (except May 1917 to June 1919 on furlough, 2d Lieut. and 1st Lieut., Engrs., U. S. Army, 1½ years overseas with combat troops; supervised construction of roads, bridges, shelters, artillery emplacements, etc.) Jun. Drainage Engr. and (after July 1919) Drainage Engr., U. S. Bureau of Public Roads, Washington, D. C., made numerous surveys, reports and designed improvements of tracts needing drainage; Prin. Asst. investigating and designing plans for reclamation and flood protection along Saginaw River, Mich.; conducted research on effect of tile drains in removing seepage behind Mississippi River Levees in Illinois, etc.: Sept. 1919 to May 1920 Asst. Prof., C. E. Dept., Univ. of Mississippi, in charge of instruction in surveying, mechanical drawing, railroad engineering, hydraulics, water power engineering and testing laboratory: June to Sept. 1920 Res. Engr. in charge of sanitary sewer construction for Town of Senatobia, Miss.: Oct. 1920 to May 1921 Asst. Prof., and Aug. 1921 to date Associate Prof., Agricultural Eng. Dept., Iowa State Coll., in charge of instruction in graphic methods, drainage engineering and irrigation engineering; past 1½ years also designed and instituted courses in excavating machinery, drainage administration and drainage pumps and pumping plants: June to Aug. 1921 in private practice, drainage work, designing improvement for 8 000-acre plantation in Mississippi River Delta: since 1921 also occasional consulting work. (Active practice 10.7 years: Res. Ch. 7.6: Design 3.8). Refers to G. R. Boyd, S. H. McCrory, A. Marston, C. S. Nichols, W. J. Schlick, W. L. Thompson, C. H. West, D. L. Yarnell.

BUCHHECKER, ALBERT ISRAEL, Assoc. M. Am. Soc. C. E.—W. 725 Chelan Ave., Spokane, Wash.—(elected Jan. 19, 1920.) (Age 41. Born Mason City, Iowa.) (B. S. C. E., Univ. of Wis., 1908.)—June to Sept. 1908 Asst. Engr. on water-power reconnaissance, and Sept. 1908 to June 1909 Substation Operator, British Columbia Elec. Ry. Co., Victoria,

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(12) B. C.: June to July 1909 Transitman on cement plant location: Sept. to Dec. 1909 Field Draftsman, Boise & Western Ry.: July to Sept. 1909 Draftsman, Dec. 1909 to Dec. 1912 Asst. Engr., and Dec. 1912 to date Engr. of Sewer Design, City Engr.'s office, Spokane, Wash. (Active practice 14.7 years: Res. Ch. 10.2: Design 13.2). Refers to H. S. Baker, C. A. Burnette, A. D. Butler, J. W. Cunningham, C. E. Davis, B. J. Garnett, J. C. Ralston.

DANIELS, ARTHUR, Assoc. M. Am. Soc. C. E.—Chicago, Milwaukee & St. Paul Ry. Depot, Minneapolis, Minn.—(elected Dec. 6, 1915.) (Age 38. Born Marion, Iowa.) (B. E.,

373 Iowa State Coll., 1907.)—June to Sept. of years 1903–1906 Rodman, Chicago, Milwaukee & St. Paul Ry.: June 1907 to date with C., M. & St. P. Ry. as follows: June

(7) 1907 to Jan. 1911 Instrumentman; Jan. 1911 to Jan. 1917 Asst. Engr., 3 years in charge of masonry work and miscellaneous structures and investigations on Middle Dist. (six divisions); and 3 years in charge of track elevation in Milwaukee, Wis., also construction of large concrete grain elevator (cost of work \$2 000 000); Jan. 1917 to Jan. 1918 Dist. Carpenter in charge of water supply and maintenance of bridges and buildings in Middle Dist.; Jan. to Sept. 1918 Asst. Engr. in charge of making field inventory of Milwaukee Terminals for valuation; since Sept. 1918 Dist. Engr. in charge of engineering work and construction on Northern Dist. (6 divisions, 3 000 miles of main-line track). (Active practice 15.6 years: Res. Ch. 12.1). Refers to T. L. D. Hadwen, A. G. Holt, C. F. Loweth, R. J. Middleton, W. H. Penfield, W. R. Powrie, A. Yappen.

ESPY, THOMAS WILLARD, Assoc. M. Am. Soc. C. E.—375 Sutter St., San Francisco, Cal.—(elected Sept. 3, 1913.) (Age 39. Born Oysterville, Wash.) (B. S. in Min. Ore. Agrl.

374 Coll., 1904.)—1898 to 1905 (6 seasons) on hydraulic mining in Northern California; 2 years as Mgr. and Engr. of two large hydraulic mines: 1904 to 1906 (2 years)

(13) graduate student in engineering, Univ. of California: June to Oct. 1906 owned and operated a custom assay office at Manhattan, Nev.: Nov. 1906–Jan. 1907 made observations on rainfall and run-off of San Pablo Creek Watershed for Syndicate Water Co. of Berkeley, Cal.: April 1907 to June 1910 Asst. Engr., California Development Co., on reconstruction of the larger irrigation works of Imperial Valley, Cal.; 1 year as Chf. of Party on topographic survey and locating canals; 1 year had complete charge of Operating Dept., which included diverting, delivery and measurement of water to more than 250 000 acres; also in charge of hydrography and calibration of many large measuring structures; 1 year in charge of design and construction of several hundred thousand dollars worth of permanent reinforced concrete irrigation structures (diverting weirs, headgates, drops, wasteways, etc.): May to Dec. 1911 had charge of county highway location and construction in State of Washington: Dec. 1911 to date with Eng. Dept., Spring Valley Water Co. of San Francisco, until April 1913 in charge of hydrography and special investigation; made study of underground water supply in Livermore and Sunol Valleys; made studies and estimates of various types of dam structures for several dam sites; since May 1913 Constr. Engr. in charge of development of Calaveras Reservoir (cost to date \$2 860 000), including construction of earth and hydraulic fill dam, conduit (19½ ft. inside diameter) concrete-lined shaft (8 ft. inside diameter, 150 ft. deep), with gates and concrete-lined adit connections at several elevations for control of water, several miles of public highway; installation and operation of gravel-washing and screening plant, etc.; during 1919 had charge of reclamation work on several thousand acres of Delta lands in Sacramento River, including construction of levees, headgates, canals, drain ditches, and preparing ground for crops; May to Sept. 1920 installed system pump and pipe to extract water from Company's underground resources at west end of Livermore Valley; since Jan. 1920 in charge of design and construction of reinforced concrete flume 12 000 ft. long. (Active practice 15.3 years: Res. Ch. 15: Design 11.5). Refers to C. Derleth, Jr., G. A. M. Elliott, B. A. Etcheverry, F. C. Herrmann, T. H. Means, M. M. O'Shaughnessy, E. T. Thurston, H. C. Vensano, O. von Geldern.

HOLLEY, HAROLD FISKE, Assoc. M. Am. Soc. C. E.—Care, Dept. of Highways, Carson City, Nev.—(elected Junior Aug. 31, 1915; Assoc. M. Sept. 10, 1918.) (Age 32. Born

375 Ocala, Fla.)—Feb. 1910 to Feb. 1912 Chainman, Rodman, and Transitman, Santa Fe Ry.: Feb. 1912 to Feb. 1916 with California Highway Comm. as follows: Feb. to Aug.

(13) 1912 Transitman; Aug. 1912 to March 1913 Locating Engr. on mountain location in Northern California; March to Aug. 1913 Draftsman on design of road layouts and structures; Aug. 1913 to Feb. 1916 Res. Engr. and Constr. Engr. in charge of construc-

FOR TRANSFER

tion of concrete, asphalt and macadam highways and concrete bridges: Feb. to July 1916 in private practice, reports on highway projects: July 1916 to Feb. 1917 Asst. Engr., San Diego & Arizona Ry., on mountain location in Carrizo Gorge: Feb. to May 1917 Designing Engr. on private highway project: May to Dec. 1917 Locating Engr., Govt. Railways of Alaska: Dec. 1917 to Feb. 1918 in private practice, report on mining properties: Feb. 1918 to date with Nevada Dept. of Highways as follows: Feb. to Aug. 1918 Chf. Draftsman; Aug. 1918 to Jan. 1919 Dist. Engr. in charge of maintenance of 450 miles of road; Jan. 1919 to Jan. 1921 Engr. of Designs in charge of all highway designs, estimates, etc., of Federal Aid highway system in the state; since Jan. 1921 Engr. of Surveys and Designs in charge of reconnaissance, surveys, plans, specifications and estimates for State Highway Dept. (Active practice 13 years: Res. Ch. 10.3: Design 7.2). Refers to R. J. Arey, W. S. Caruthers, C. C. Cottrell, F. A. Kittredge, F. G. Somner.

BERNAN, JOSEPH THOMAS, Assoc. M. Am. Soc. C. E.—Care, Interstate R. R., Andover, Va.—(elected Nov. 9, 1920.) (Age 31. Born Brooklyn, N. Y.) (B. S., 1911, and C. E., 1912, Manhattan Coll.)—June to Sept. 1910 Chairman, New York State Highway Comm.: Oct. to Dec. 1911 Computer, New York Central R. R.: Jan. to April 1912 Computer Lehigh Valley R. R.: May to July 1912 Instrumentman in field party on construction of Hunter Brook Tunnel, Catskill Aqueduct: July to Oct. 1912 Computer, Canadian Pacific Ry.: March to Aug. 1913 Draftsman, Public Service Comm., on drainage and ventilation plans for New York subways: Aug. 1913 to April 1914 Asst. Engr. in charge of office work in connection with revaluation of real estate and rights of way, L. V. R. R.; supervised all computations, and compiling and assembling report: May to Aug. 1914 Inspector of paving, New York City Highway Dept.: Aug. 1914 to Jan. 1916 Draftsman, Track Dept., Public Service Comm., checked track plans and prepared material estimates: Jan. 1916 to Nov. 1917 Asst. Engr. in charge of office work in connection with valuation of real estate and rights of way, Boston & Maine R. R.: Dec. 1917 to June 1919 2d and 1st Lieut., R. R. Transportation Corps, Cable Officer, Headquarters, Transportation Corps, A. E. F., and Asst. to Deputy Director Gen. of Transportation; with 84th Co., Trans. Corps: July to Aug. 1919 Asst. Engr., compiling cost statistics for Federal valuation of railroads: Aug. 1919 to Oct. 1920 Asst. Engr. on valuation of public utilities: Nov. 1920 to date Office Engr., in charge of design of steel and masonry structures and preparation of all plans in connection with construction of Guest River Extension, Interstate R. R. (Active practice 10.7 years: Res. Ch. 7.1: Design 2.3). Refers to N. S. Hill, Jr., H. W. Hudson, S. K. Knox, G. J. Melise, W. J. Willgus.

MYERS, CLYDE, Assoc. M. Am. Soc. C. E.—E2718 Fifth Ave., Spokane, Wash.—(elected April 19, 1920.) (Age 38. Born Pullman, Wash.) (B. A., 1909, and M. S. in Civ. Eng., 1916, State Coll. of Wash.)—Sept. 1909 to May 1913 Principal and teaching mathematics in high schools of Eastern Washington: Sept. 1913 to May 1916 Instructor in elementary mathematics, Washington State Coll.: June to Aug. 1914 Inspector, Rodman and Chairman on street and sewer improvements, and June to Aug. 1915 Instrumentman in charge of field work in laying out street pavement improvements and sewer construction, with City Engr. of Pullman, Wash.: June to Sept. 1916 City Engr. of Pullman, in direct charge of city improvements, chiefly about 1 mile of street pavement, including curbs and sidewalks: Oct. to Dec. 1916 Res. Engr. on road and concrete bridge work for Whitman County, Wash.: Jan. to Dec. 1917 City Engr. of Pullman, in charge of design and construction of street pavements, sewer construction and water-works extensions: Jan. 1918 to July 1919 1st Lieut. and Capt. of Engrs., U. S. Army, 10 months training troops in United States, and 9 months in charge (under direction of Capt., U. S. Engrs.) of highway maintenance and construction in France: Aug. to Nov. 1919 Office and Field Engr., Columbia Basin Survey Comm.: Dec. 1919 to Feb. 1921 Teller, First National Bank of Pullman: March to Nov. 1921 City Engr. of Pullman, in charge of design and construction of 2½ miles of pavements: Jan. to March 1922 Salesman, North American Securities Co., Spokane, Wash.: April 1922 to date Field Engr. and Draftsman in office of City Engr. of Spokane. (Active practice 11.9 years: Res. Ch. 5.5: Design 2.1). Refers to A. D. Butler, C. E. Davis, E. Logan, H. E. Phelps, A. J. Turner, A. A. Young.

MEHNABEL, WILLIAM CHARLES, Assoc. M. Am. Soc. C. E.—3016 Henford Rd., Baltimore, Md.—(elected Nov. 25, 1919.) (Age 47. Born Baltimore, Md.)—1897 graduated from Maryland Inst.: 1898 to 1900 (2 years) Gen. Supt. on building construction for J. Henry

FOR TRANSFER

- Miller, Baltimore, Md.: 1900 to 1901 (1 year) Supt. on construction of buildings, Maryland Penitentiary, with Hugh H. Magruder, Archt.: 1901 to 1902 (1 year) Supt. for H. B. Henrahan & Son, Stone Contrs.: 1902 to 1903 (1 year) Supt. of Constr. for John Waters, Bldr.: 1903 to 1912 (9 years) Estimator, Supt. in charge of erection, Draftsman, etc., and 1912 to date (11 years) Chf. Engr., Dietrich Bros., Baltimore: past 25 years has been in responsible charge of several hundred structures, and designed probably several hundred structures, tank supports, etc., while Draftsman (4 years) and Chf. Engr. (11 years); also Cons. Engr. in private practice during this time. (Active practice 25 years: Res. Ch. 25: Design 15). Refers to A. W. Buel, C. A. Cummins, H. F. Doeleman, A. H. Hartman, W. D. Janney, A. H. Krone, W. W. Pagon, H. G. Perring, G. C. Saunders, V. P. Saxe.

- SHERMAN, ARTHUR LOUIS, Assoc. M. Am. Soc. C. E.—20 Clinton St., Newark, N. J.—(elected Junior Jan. 4, 1910; Assoc. M. Jan. 6, 1915.) (Age 40. Born Foxborough, 379 Mass.) (B. S., Mass. Inst. Tech., 1906.)—June 1906 to June 1914 Asst. Engr., Board of Water Supply, New York City, 3 years in charge of surveys and mapping of 4 000 (1) acres (1 200 parcels); 4 years Asst. Sec. Engr. on construction of aqueduct, tunnels, etc.: July 1914 to March 1916 Asst. Engr., New York State Highway Comm., in charge of construction of 13 miles concrete highway, design and location of various highways: March 1916 to July 1917 private engineering and contracting; surveying on Long Island; Managing Partner of contracting firm on sewerage construction: Aug. 1917 to March 1918 supervision of construction plant at Camps Upton and Merritt; Advisory Engr. on housing at Bristol (Pa.) shipyard: March 1918 to June 1920 Asst. Advisory Engr. of Sanitation, Constr. Div., U. S. Army, Washington, D. C., on design and general oversight of construction of works of sanitation for army camps: July 1920 to date with North Jersey Dist. Water Supply Comm., Newark, N. J., 5 months as Senior Asst. Engr. Designer, on water supply structures; and since Jan. 1921 Designing Engr. in charge of design of all water supply structures, highways, railroads, bridges, etc. (Active practice 16.3 years: Res. Ch. 13: Design 7.7). Refers to H. P. Barnes, E. B. Besselleve, E. W. Clarke, L. S. Doten, W. W. Peabody, A. H. Pratt, M. R. Sherrerd, B. H. Walt, F. E. Winsor.

- TALLMAN, PAUL BERTRAM, Assoc. M. Am. Soc. C. E.—19 Yale Pl., Rockville Center, N. Y.—(elected Junior Oct. 3, 1905; Assoc. M. Sept. 6, 1910.) (Age 39. Born East 380 Orange, N. J.)—July to Sept. 1902 at Clearfield Bituminous Coal Co.'s mines, Rossiter, Pa.: Jan. 1903 Blueprinter, Feb. to June 1903 Chairman, June to Sept. 1903 Rodman, (1) Sept. 1903 to Nov. 1904 Draftsman in Terminal Engr.'s office, Nov. 1904 to Jan. 1906 Instrumentman, New York Central & Hudson River R. R.: Jan. 1906 to June 1909 Engr. and Gen. Supt. of Constr. for Bunn & Nass, Gen. Contrs., New York City, in responsible charge of work, completing about \$600 000 worth, fireproof structures and alterations requiring shoring and underpinning: Aug. 1909 to date with Warren & Wetmore, Archts., New York City, until April 1911 as Superv. Engr. and Representative, in responsible charge of work in connection with new Union Station, Houston, Tex. (cost \$500 000); then Engr. and Supt. in responsible charge of work, designing mechanical equipment and plants; also supervising erection of same and of buildings, principally Aeolian Bldg. and 402 and 411 Fifth Ave. Bldgs., New York City, designing mechanical equipment and supervising details for a number of large projects not built (estimated cost approx. \$30 000 000); since April 1915 Chf. Engr. in responsible charge of all engineering, designing and supervising installations costing approx. \$150 000 000, including Ritz-Carlton Hotel, Atlantic City, N. J., Broadmoor Hotel, Colorado Springs, Colo., Plaza Hotel Addition, Heckscher Bldg., etc., New York City. (Active practice 19.3 years: Res. Ch. 16.6: Design 9.7). Refers to H. G. Balcom, A. B. Corthell, A. L. Kehoe, J. D. Matheson, G. R. Wadsworth, W. J. Wilgus.

- WHITBECK, LEE FIELD, Assoc. M. Am. Soc. C. E.—Santa Ana, Salvador, Central America—(elected Junior Dec. 6, 1904; Assoc. M. Nov. 1, 1910.) (Age 40. Born Dead- 381 wood, S. Dak.) (B. S., Sheffield Sci. School, 1903.)—July 1903–Sept. 1905 Rodman, Leveler and Transitman, Mexican International R. R.: Oct. 1905–May 1908 with (1) Mexican Central R. R., 2 months as Div. Engr. on reconstruction at San Pedro River in Chihuahua, 5 months Asst. Div. Engr. on construction, Colima Extension; 1 year Res. Engr. M. of W., and over 1 year Div. Engr. on construction, Tampico Short Line: July 1908–Sept. 1909 on surveys of 217 000-acre tract in Sierra Madres for Durango Land & Lumber Co.: Oct. 1909–July 1913 with National Rys. of Mexico, until Sept. 1910 as Res.

FOR TRANSFER

Engr. on construction on 2d residency, San Lorenzo Cut-Off of the Interoceanic (3 months) and on 3d residency of Llano Grande Extension (9 months); then Prin. Engr., in charge of construction, Penjamo-Ajuno Line (135 km.): Feb. and March 1914 Res. Engr. on railroad construction, United Fruit Co.: April-Sept. 1914 Res. Engr. on construction, International Rys. of Central America: Oct.-Dec. 1914 with Cia Electrica de Oriente on hydro-electric surveys in Republic of Salvador: Jan.-Aug. 1915 Transltman, U. S. Steel Products Co., on location surveys between San Salvador and La Libertad: Sept. 1915-April 1916 Supt. of Constr. for R. Kellhauer, Contr., in charge of engineering, also grading, masonry, tracklaying, etc., on 23 km. of railroad: May 1916-March 1920 with International Rys. of Central America, until Sept. 1917 as Prin. Engr. in charge of new construction in Salvador, then (6 months) Chf. Engr. of Constr., and (after May 1918) Chf. Engr. (while with Company 68 km. of new line were completed and put in operation): April 1920 to date with Kellhauer & Rodezno, Gen. Contrs., as Directing Engr. in El Salvador in charge of railroad location and construction on 150 km. (Active practice 19.3 years: Res. Ch. 15.9: Design 1.9). Refers to W. V. Alford, F. W. Andros, T. H. Barnes, F. W. Blackford, J. W. Kendrick, T. K. Mathewson, S. F. Shaw, H. M. Taylor.

WOLTMANN, JESSE JOHN, Assoc. M. Am. Soc. C. E.—225 Unity Bldg., Bloomington, Ill.—(elected Sept. 10, 1918.) (Age 34. Born Nokomis, Ill.) (B. S. in Civ. Eng., Univ. of Ill., 1914.)—Sept. to Dec. 1911 Rodman, E. R. Kinsey & Bros., St. Louis, Mo., on surveys: Jan. to Dec. 1912 Asst. Engr. with Chas. W. Brown, Cons. Engr., Jacksonville, (8) Ill., survey and designs, drainage work and Res. Engr. at Anna, Ill., on water-works, sewers, sewage disposal; after June 1912 City Engr. on completion of this work: June to Sept. 1913 Asst. Engr., Bloomington, Ill., on brick pavement and 20-in. water main construction: June 1914 to Jan. 1915 City Engr. of Anna, on pavement and storm sewer construction: March to Aug. 1915 Engr., Big Lake Improvement Co., on Illinois River design and construction, tile drainage: Aug. 1915 to July 1917 City Engr. of Anna, on construction of pavement and sewers, design of paving, topographic survey, etc.; also Engr. for Road Dist. No. 5, Union County, Ill., on design and construction of gravel and macadam roads: July 1917 to Jan. 1918 Office Engr. and Supt. of Constr., Bates & Rogers Constr. Co., at Camp Grant, Rockford, Ill., wells, reservoir, distribution system, pump station, etc., 2 months at Cleveland, Ohio, on reinforced concrete: Feb. to Aug. 1918 Asst. Engr., Constr. Div., U. S. Army, Washington, with Advisory Engr. on water supply for camps, cantonments, hospitals, warehouses, etc., design of water supply and distribution systems, pump stations, etc.: Aug. 1918 to Feb. 1919 Asst. Chf. Engr., Bates & Rogers Constr. Co., on construction of air nitrate plant No. 3, Toledo, Ohio, supervision of all engineering departments, industrial buildings, water-works, sewerage, railroads, pavements, etc.: April 1919 to May 1921 City Engr., Nokomis, Ill., on design and construction of sewers and sewage disposal; Contr. on small sewers: May 1921 to date member of firm, Taylor & Woltmann, Bloomington, Ill., on design and supervision of water supply and distribution, sewers, sewage disposal, paving, drainage, etc. (Active practice 9.6 years: Res. Ch. 9.2: Design 4.2). Refers to M. L. Enger, H. F. Ferguson, C. Goldsmith, G. C. Habermeyer, A. C. Stanfield.

YOUNGS, WALTER CHARLES, Assoc. M. Am. Soc. C. E.—Box 367, Dayton, Tex.—(elected Nov. 26, 1918.) (Age 47. Born Boutte, La.) (B. S., La. State Univ. and A. and M. Coll., 1899.)—Oct. 1899 to Oct. 1900 Inspector of bridge construction, Chicago & Alton Ry., at Glasgow, Mo., concrete and stone masonry, pneumatic caisson work: Oct. 1900 to (15) Feb. 1901 Asst. Engr., M. of W., C. & A. Ry., at Bloomington, Ill.: Feb. to Sept. 1901 Rodman, Choctaw, Oklahoma & Gulf Ry.: Nov. 1901 to May 1902 Res. Engr., construction, Blackwell, Enid & South Western Ry.: June 1902 to March 1903 Res. Engr., construction, Denver, Enid & Gulf Ry., Marshall, Okla.: June to Aug. 1903 Res. Engr., St. L. B. & M. Ry., Alice, Tex.: Aug. 1903 to Aug. 1904 general engineering practice at Lake Charles, La., located and constructed railway for saw-mill, designed and constructed drainage canal for Sulphur Co.: Aug. 1904 to June 1907 Res. Engr., St. L. B. & M. Ry., Alcoa to Corpus Christi, Tex.: June to Aug. 1907 located and constructed 6 miles of railway for State of Texas at Brazoria, Tex.: Aug. 1907 to June 1917 general practice of engineering at Edna, Tex.; designed and constructed three drainage districts, and County Highway Engr. for Jackson County: June to Nov. 1917 locating and constructing railway in Lower Mississippi, Gulf, Mobile & Northern Ry.: Nov. 1917 to June 1919 making detail map of Jackson County: June to Oct. 1919 Supt., Humble Refining Co., in charge of roads, drainage and sewers, Baytown Refinery, Tex.: Oct. 1919 to Oct. 1922

FOR TRANSFER

County Highway Engr., Polk County, Tex., expending \$1 300 000, design and construction of highways: Oct. 1922 to date County Highway Engr., Liberty County, Tex., building highways on Federal Aid projects. (\$2 000 000 bond issue). (Active practice 23.1 years; Res. Ch. 21.1; Design 9.2). Refers to J. D. Fauntleroy, C. H. Kendall, A. C. Love, F. D. Nash, W. O. Washington, G. G. Wickline.

FROM THE GRADE OF JUNIOR

HAERTLEIN, ALBERT, JUN. AM. Soc. C. E.—312 Pierce Hall, Harvard Eng. School, Cambridge, Mass.—(elected March 9, 1920.) (Age 27. Born Alton, Ill.) (A. B., Harvard Univ., 1916; B. S., Mass. Inst. Tech., 1918.)—Asst. in surveying, Harvard Eng. Camp (June to Sept. 1916) and Massachusetts Inst. of Technology Summer Camp (July to Sept. 1917): Sept. 1917 to April 1918 (part of time) Asst. in Dept. of Civ. Eng., Massachusetts Inst. of Technology: May 1918 to Sept. 1919 with Corps of Engrs., U. S. Army, after July 1918 as 1st Lieut. in command of Co. B, 546th Engrs., and from Sept. 1918 to June 1919 with A. E. F. on highway maintenance: Sept. 1919 to date Instructor in Civ. Eng., Harvard Eng. School; during summers 1921 and 1922 in charge of instruction in surveying at Harvard Eng. Camp; Asst. to Prof. G. F. Swain in consulting work, bridges, grade-crossing elimination projects, tunnels, etc. (Active practice 4.6 years; Res. Ch. 1.7). Refers to H. J. Hughes, L. J. Johnson, G. F. Swain, H. M. Turner, F. S. Wells.

HARN, JOHN EDWIN, JUN. AM. Soc. C. E.—2314 Oak St., Baltimore, Md.—(elected May 12, 1919.) (Age 30. Born Baltimore, Md.) (C. E., Cornell Univ., 1915.)—June to 385 Sept. 1914 with Pennsylvania Water & Power Co., Holtwood, Pa., on stream flow measurements and maintenance work on dam and power house: June 1915 to Jan. (5) 1918 Secy., Willard E. Harn Co., Inc., Bldrs., building construction and contracting: Jan. 1918 to Jan. 1919 Research Engr., Airplane Eng. Div., Bureau of Aircraft Production, U. S. War Dept., McCook Field, Dayton, Ohio, in charge of experiments on planes in flight and design of testing apparatus: Jan. 1919 to date Secy.-Treas., Willard E. Harn Co., Inc., in charge of estimating and designing, having direct supervision of construction of Rivoli Theatre (\$500 000) (April 1920 to Jan. 1921) and other buildings. (Active practice 7.8 years; Res. Ch. 5.5). Refers to W. T. Ballard, H. M. Priest, G. C. Saunders, W. C. Schnabel, B. L. Smith, S. J. Spool.

SMITH, EDWARD KING, JUN. AM. Soc. C. E.—823 Bushnell St., Beloit, Wis.—(elected Nov. 4, 1914.) (Age 31. Born Chicago, Ill.) (C. E., Univ. of Wis., 1914.)—June to 386 July 1913 Asst. Instructor in special charge of hydrography and geodesy, and June to July 1914 Instructor in special charge of hydrography, meter rating and triangulation, (7) Univ. of Wisconsin Summer Surveying Camp, Devils Lake, Wis.: July 1914 to July 1917 Asst. City Engr., Beloit, Wis., in charge of field work for sidewalks, sewers, paving and other improvements; 6 months on detailed design of storm sewers: July 1917 to May 1919 2d Lieut., Signal Corps, U. S. Army, 6 months at S. C. Photo Laboratory, Paris, France, 2 months second in charge, 4 months Depot Engr. Officer, S. C. R. D., Cour Cheverny, France, in responsible charge of building camp, school, hospital, water supply and repairs of roads and buildings: May 1919 to date First Asst. City Engr., Beloit, in charge as First Asst. of plans, field work and supervision of construction of paving, 10½ miles of sewers and other improvements; designed new sanitary sewer system for city (estimated cost \$400 000); wrote local building code in collaboration with State Bldg. Engr., and 1 year also acted as Bldg. and Elec. Inspector. (Active practice 8.7 years; Res. Ch. 5.8; Design 2.5). Refers to C. P. Conrad, N. M. Isabella, D. W. Mead, C. V. Seastone, L. S. Smith.

STANLEY, WILLIAM EDWARD, JUN. AM. Soc. C. E.—39 West Adams St., Chicago, Ill.—(elected May 31, 1916.) (Age 31. Born Burrton, Kans.) (B. S. in C. E., Kans. State 387 Agri. Coll., 1912; C. E., Purdue Univ., 1916.)—June to Dec. 1912 Bridge Inspector with State Engr., Kansas, supervised construction of concrete highway bridges in Waubesa County, Kans.: Jan. to Oct. 1913 Chainman and Instrumentman, U. S. Land Office, land subdivision and examination surveys in California with W. J. Lightfoot, U. S. Surveyor: Oct. 1913 to April 1917 Instructor in Hydraulics, Purdue Univ., and made extensive experiments on discharge of sprinkler nozzles and friction losses for flow of water through valves and fittings; also student, post-graduate course: June to Sept. 1915 Asst. Engr. with State Engr., Kansas, made surveys and plans for city paving and

FOR TRANSFER

drainage work: June to Sept. 1916 Asst. Engr. with Pearse & Greeley, Cons. Engrs., Chicago, made hydraulic and sanitary investigations and designs: April 1917 to Aug. 1919 1st Lieut. and Capt. of Engrs., U. S. Army, with A. E. F. (Dec. 1917 to Aug. 1919), hospital construction (2 months), with troops (9 months), took part in Meuse-Argonne offensive with 26th Div.; Instructor, 2d Corps Schools (8 months): Sept. 1919 to date with Pearse, Greeley & Hansen, until July 1920 as Res. Engr. supervising construction of sewerage system for South Charleston, W. Va. (\$130 000); then Asst. Engr. on construction of Decatur Impounding Dam, at Decatur, Ill. (\$800 000); had responsible charge of construction (under direction of Chf. Engr.); since April 1922 Asst. Engr., at Chicago, Ill., on water supply and sewerage investigations, reports, designs and construction. (Active practice 10.4 years: Res. Ch. 9.1: Design 1.5). Refers to L. E. Conrad, S. A. Greeley, P. Hansen, J. A. Holmes, L. Pearse, H. B. Walker.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.

JOHN H. DUNLAP,
Secretary.